

HOW NATIONAL CURRENCIES STIFLE CITIES

WE MUST SUPPOSE THAT THE VERY EARLIEST proto-cities and cities, trading with one another in prehistoric times, bartered the obsidian, copper, shells, animals, horn, pigments, rushes, or other goods of their territories. Unmediated by currency, the value of bartered goods would have fluctuated sensitively. An item in high demand would have commanded a lot of imports, but if demand fell off, as additional sources of supply or substitutes were found, the superseded product would have commanded fewer imports, just as a falling currency does. Then the settlement exporting it would have been in trouble, unless it hustled up something else worth trading or imitated some of the artifacts it had formerly imported—a process we call “economic borrowing” when we find evidence of it in ancient times.

When cities invented currencies, at first each had its own; at any rate, the very early city-states of which we have knowledge, in Mediterranean Europe, the Near East, China, and India, created their own currencies and circulated them in trade. After an ancient city-state had been conquered by a more powerful neighbor and thus converted to a provincial city, or after it had voluntarily surrendered much of its sovereignty to a federation, it typically continued, nevertheless, to mint and circulate a currency of its own. Even the Roman Empire only gradually eliminated the non-Roman currencies of its conquered provinces and dependencies, and it wasn't until later, in an unsuccessful effort to combat inflation at the time of Diocletian, that Rome decreed standardized prices, which is to say rigidly standardized currency values, throughout its realm.

In early medieval Europe, city currencies once again became the norm. Venice welcomed and used imperial Byzantine coinage because of its trade with the Eastern Em-

pire, but circulated its own currency as well. The cities that rose in the wake of Venice and extended their own trading networks generally created their own currencies.

Medieval city currencies of Europe persisted into Renaissance times, and indeed multiplied, as European economic life developed with the multiplying of cities. Even currencies that did not originate in cities proper, such as Florence, Genoa, or Amsterdam, must often have worked much as if they were the currencies of city-states, because the principalities doing the minting were often quite small. For instance, the currency of Brandenburg was the currency of Berlin, that of Saxony the currency of Dresden, that of the Dukedom of Milan the currency of Milan, and so on. Many such currencies persisted even into recent times. German monetary union was not instituted until 1857, as a precursor to the formation of the German Empire. Except during one brief and ill-fated experience with centralized government, inspired by the French Revolution, Swiss cities, as cantons, retained the power to create their own currencies until after 1848.

Today we take it for granted that the elimination of multitudinous currencies in favor of fewer national or imperial currencies represents economic progress and promotes the stability of economic life. But this conventional belief is at least worth questioning in view of the function that currencies serve as economic feedback controls. I am going to argue that national or imperial currencies give faulty and destructive feedback to city economies and this in turn leads to profound structural flaws in those economies, some of which we cannot overcome no matter how hard we try.

As we all know, when a nation's currency declines in value relative to those of other nations with which it trades, theoretically the very decline ought to help correct the na-

tion's economy. Its exports automatically become cheaper to customer nations, and so its export sales should increase; at the same time, its imports automatically become more expensive, and this should help its own manufacturers. Theoretically, then, a decline in the value of a national currency ought to work like both an export subsidy and a tariff, coming into play precisely when a nation begins to run a deficit in its international balance of payments because it is exporting too little and importing too much. Furthermore, this automatic export subsidy and tariff ought to remain in play precisely as long as it is needed, no longer. If that were indeed the effect that national-currency fluctuations had, they would be elegant examples of control through feedback, registering that a correction was necessary and, at the same time, triggering the appropriate correction.

To understand why national currencies don't actually perform that constructive function, we need to understand how feedback controls work. First of all, it is essential that the feedback information govern a responding mechanism. For example, in our breathing, a momentary rise in the level of carbon dioxide in the bloodstream automatically triggers the brainstem's breathing center, which shoots a message to the diaphragm to contract and allow the lungs to fill again. In this case, the triggering information is the amount of carbon dioxide in the blood, and the responding mechanism is the diaphragm. As organisms, we depend on vast arrays of feedback controls, all of them working so appropriately and automatically that we are unaware we have them until researchers tell us we do.

When new enterprises in a city multiply and diversify rapidly, the information feeds back in the form of crowding, inconvenience, and increasing competition for city space, and it triggers the appropriate correction: some enterprises move out of the city into the region, still within reach of the city services and markets they require. Similarly, when city jobs and the city's demands upon its region for rural goods increase, this information feeds back into the system in the form of labor shortages in the city's hinterland. That triggers the appropriate corrections: the use and, if need be, the development of rural labor-saving equipment. City regions are the outcomes of many different corrections triggered by many different inputs of feedback information. To be sure, the corrections are not wholly automatic, but then neither is our breathing. We can hold our breath—within limits.

Feedback controls always work on their own terms. For example, when a government prints money exuberantly, the information feeds back into the system and triggers the appropriate correction: a given unit of money buys less. Wishes for a different correction—economic expansion—don't avail; expansion is a different response to different stimuli, under quite different controls. By analogy, the common thermostat works beautifully at its task of registering changes in temperature and triggering the appropriate corrections, but it is futile to wish that it would

govern the speed of a rotary mill; however, a different feedback control does exactly that. In short, feedback controls are built into the systems they correct and the corrections they trigger are not discretionary. They are precisely to the point, and the point is always the specific correction of results of specific happenings.

The trouble with national currencies as constructive feedback controls is not that they are feeble at their job. They are anything but that. Those dreary little columns of international exchange-rate figures in the back pages of newspapers, creeping from day to day in this direction or that by little fractions of percentage points, can represent the power of life or death over entire industries. A gradual 10 percent rise in the value of the English pound in 1979 and 1980 forced the major producers of English china and earthenware to lay off workers, and put several of the smaller producers out of business altogether, because they were priced out of foreign markets that until then had remained strong for these wares. The rising pound was simultaneously pricing the wares out of their domestic markets, too, as foreign imports became cheaper. The chairman of the largest producer, Wedgwood, blamed the rise of the pound on a combination of North Sea oil production off Scotland, which had improved Great Britain's balance of trade, and the government's policy of setting interest rates high in order to attract foreign capital. He was probably right.

CURRENCIES ARE POWERFUL CARRIERS OF FEED-back information, then, and potent triggers of adjustments, but on their own terms. A national currency registers, above all, consolidated information on a nation's international trade. When net international exports of goods or services rise, relative to those of other nations, the currency, being in demand, rises in value; when exports fall off, it declines in value. International imports and exports of capital work in just the opposite way. If a country has been importing more capital than it has exported (by borrowing abroad, for example), the value of its currency is automatically bolstered. Conversely, if it has exported more capital than it has been importing (by lending, making gifts, paying interest on prior foreign loans, or exporting the profits of foreign-owned industries), the value of its currency is automatically depressed to that extent.

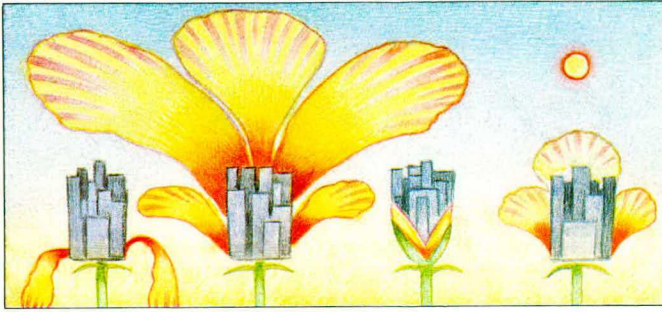
The reverse effects of movements of capital do not long outweigh the effects of international trade in goods and services. The latter factor dominates over the long term. For example, suppose a nation borrows heavily abroad to develop its economy. Its currency's value is automatically bolstered from the very fact of the borrowing. But then suppose that the development schemes do not pay off in expanded international exports of goods and services or in replaced foreign imports. The value of the currency must then decline. The cost of interest on the loan, which



seemed so feasible when the loan was bolstering the debtor nation's currency, becomes devastating as the currency declines. That is why heavy international borrowing that does not pay off in a greatly improved balance of trade for the debtor nation can abruptly bankrupt a country unless the lenders agree to keep lending to it and to ease terms of repayment and interest. The threat then, of course, becomes bankruptcy of the lenders.

Because currency feedback information is so potent, and because the information is so often not what governments want to hear, nations commonly go to extravagant lengths to try to block or resist the information. Furthermore, when the information does come through—as, sooner or later, it always does, no matter what the evasions—the effects can be inappropriate, to say the least, as they were in the English Midlands, where most of the nation's potteries are located. Unemployment was already high in Britain generally and very high in the Midlands; the country was suffering from declining exports of its manufactures, and had been for decades. But those realities were overridden by the realities of the North Sea oil and the imports of foreign capital.

National currencies, to sum up, give potent feedback but are impotent at triggering appropriate corrections. To picture how such a thing can be, imagine a group of people who are all properly equipped with diaphragms and lungs but who share among them only one brainstem breathing center. In this goofy arrangement, the breathing center would receive consolidated feedback on the carbon-dioxide level of the whole group and would be unable to discriminate among the individuals producing it. Everybody's diaphragm would be triggered to contract at the same time. But suppose some of those people were sleeping while others were playing tennis. Suppose some were reading about feedback controls while others were chopping wood. Some would have to stop what they were doing and subside into a lower level of activity. Worse yet, suppose some were swimming and diving, and for some reason, such as the breaking of the surf, had no control over when they were submerged. Imagine what would happen to them. In such an arrangement, the feedback control would be working perfectly on its own terms but the results would be wretched, because of a flaw designed right into the system.



I HAVE HAD TO USE A PREPOSTEROUS EXAMPLE BECAUSE systems as structurally flawed as this don't exist in nature; they wouldn't last. Nor do they exist in the machines we design to incorporate mechanical, chemical, or electronic feedback controls; machines this badly conceived wouldn't work. Nations, from this point of view, don't work either, yet they exist.

Nations are flawed in this way because they are not discrete economic units, although we pretend that they are and compile statistics about them based on that premise. Nations include, among other things in their economic grab bags, differing city economies, which need different corrections at given times; yet those economies share a currency that gives all of them the same information at a given time. The consolidated information is not specific to them even with respect to their foreign trade, and it is no information at all with respect to their trade with one another. Yet this wretched feedback is powerful stuff.

Because currency feedback, at bottom, has to do with imports and exports and the balance or lack of balance between them, the appropriate responding mechanisms for such information are cities and their regions. Cities are the specific economic units that can replace imports with their own production, and the specific units that cast up streams of new kinds of exports. It is bootless to suppose that amorphous, undifferentiated statistical collections of a nation's economies will perform those functions; they won't.

Ideally, at a time when a city's exports are doing well, the city needs to receive as wide a range and as great a volume of earned imports as it can, especially from other cities, because those funds of earned imports are the grist that a city must have for its vital process of import replacing. Conversely, at a time when its exports are in decline, imports should ideally become expensive, because to escape decline from diminishing export work a city desperately needs to replace wide ranges of its imports with locally produced goods. It also needs to be stimulated to develop new kinds of export work. In other words, with falling exports, a city needs a declining currency working like a tariff and an export subsidy—but only for as long as it is necessary. Once its exports are doing well, it needs a rising currency, to earn the greatest variety and quantity of imports it can. Individual city currencies serve as elegant feedback controls because they trigger appropriate corrections to specific responding mechanisms.

This is a built-in design advantage that many cities had in the past but that almost none have now. Singapore and Hong Kong, which are oddities today, have their own currencies and so possess this advantage. They have no need of tariffs or export subsidies. Their currencies serve those functions when needed and only for as long as needed. Detroit, on the other hand, has no such advantage. When its export work first began to decline, it got no feedback. Detroit merely declined, uncorrected.

The flawed and inappropriate feedback cities get from consolidated national currencies works itself out in different ways, depending upon the international trade of their countries as a whole.

If a nation's international trade is predominantly in rural or resource goods, those exports and the feedback information they bring in contradict the realities of city trade and production. Uruguay and its chief city, Montevideo, are an example. The international value of Uruguay's currency during the formative period of that nation's economy rested wholly on the country's exports of meat, wool, leather, and a few other rurally produced goods. Since Uruguay did well with these foreign exports, foreign imports were relatively cheap, with the result that Montevideo did not take to replacing wide ranges of the plentiful imports with its own production. The more Uruguay's currency rose in purchasing power as the nation's international trade in rural goods built up, the cheaper the foreign imports became. In short, Montevideo was getting potent information on the state of Uruguay's international trade, which is all a national currency can convey. But Montevideo was not getting feedback on its own trade. Montevideo was not producing those exports nor earning those imports but was living on the country's rural work.

When Uruguay's foreign markets declined, beginning in the 1950s, Uruguay's currency inexorably began to decline in relative value. For a time the government bolstered the currency by borrowing, with the result that imports kept flowing in during the 1960s, but this couldn't last, because the projects for which the government borrowed were not, in fact, reversing the decline in the country's balance of trade. Finally, the feedback from the falling currency came in loud, clear, and unmistakable: Uruguay, you aren't producing enough salable exports. You can't continue buying all those imports.

At long last, Montevideo itself was getting accurate feedback about its own economy, which had never been creative or productive. But by the time the message came through, it was too late to be helpful. Montevideo could not respond appropriately. Its capacity to respond was atrophied. During all those years when the city had been living off the nation's rural earnings, it had failed to build up its own capacity to produce, so it had no foundation of producers' goods and services, no foundation of skills, none of the versatility at producing that it would have had to have in order to take advantage of the automatic tariff and export subsidy with which it was being presented.

CURRENCY FEEDBACK THAT ERRONEOUSLY TELLS A city that its export trade is in fine shape, as Uruguay's currency erroneously had told Montevideo, need not always be fatal. Such erroneous feedback can sometimes be corrected with tariffs, which is how the young United States, for example, evaded the consequences of faulty feedback to its young cities.

When the American Colonies won their independence, and for almost a century afterward, the international trade of the United States was overwhelmingly rural—as Uruguay's later trade would be. The southern part of the country contributed most heavily to this trade with its valuable tobacco and indigo and, later, cotton. In the North, as well, international exports were primarily natural resources and agricultural goods: fur, fish, timber, grain. The exports that the little northern cities produced for one another were useless in foreign trade, because they included nothing that European cities didn't already make themselves more cheaply. Indeed, foreign-manufactured imports, all earned by the rural exports of the country, were for the most part too cheap for American cities to replace with their own production, thanks to the high value of the country's currency. That doesn't mean that they were so cheap that all Americans could afford them, but that they were cheaper than the same things produced domestically. Imports would remain relatively cheap and plentiful unless American exports fell drastically in value and volume, and, just as in Uruguay, that couldn't happen so long as the nation's international trade in rural exports held up. Meanwhile, imports were coming in, not earned by city production and serving to deaden city production. The little American cities had quickly reached an economic impasse.

The situation was thought of not as a feedback flaw, which it was, but as the plight of American manufacturing. However, the response was germane, because it countermanded the feedback American cities were receiving. In 1816, the federal government enacted the first of many tariff measures intended not to raise revenue, like the country's earlier customs duties, but specifically to make manufactured imports artificially expensive. In effect, the tariffs told city people and producers: You aren't producing exports, and so you can't afford all these imports you aren't earning. The tariffs worked. The fact that foreign-manufactured goods were now less affordable than domestic equivalents stimulated import replacing in the cities, and their economies developed very rapidly instead of living, at one remove, off the earnings of the rural supply economies of the country.

Unfortunately, when the currency feedback was countermanded, it had to be countermanded for all the country's economies, rural as well as urban. In the South, where cities had not become productive, the tariffs simply drove up the cost of living without producing the economic benefits that they did in the North. The South's rural producers were being robbed of the cheap imports they had actually earned; in effect, they were victimized to subsi-

dize city production. So bitterly was this resented in the South that tariffs were one of the causes of the South's attempted secession from the Union in 1861 and the four-year slaughter that followed.

We may wonder why southern cities didn't respond to the tariffs constructively, the way northern cities did. At the time the tariffs were instituted, southern cities were backward relative to northern cities, and thus if they were to have been helped they would have needed protection against competition from northern manufacturers, much as northern manufacturers needed protection against competition from European manufacturers. Perhaps, had the South not been militarily defeated when it attempted independence, it would later have raised tariff barriers against the North and in this way, perhaps, encouraged its own city economies.

Southern cities were more backward than northern ones in 1816, when tariffs came into play, because they had not begun generating such exports as they technically and economically could for one another, and therefore had not started up the little networks of volatile intercity trade to be found in the North. Why the difference? Here I am conjecturing, but it may have been because the southern trade in tobacco and indigo had become so successful so soon. In the North, the poorer foreign earnings of the rural economies may have played a part in inspiring Boston and Philadelphia to improvise supplements to the rural economies upon which they drew. Whatever the reason, Boston, Philadelphia, and the other northern cities which they traded took advantage of the countermanded feedback in a fashion that Charleston and Richmond did not.

Japan, at the time it began developing its modern economy, evaded the city-deadening consequences of the feedback from its currency in much the same fashion as the United States had done earlier. The Japanese bicycle-parts producers and assemblers I have previously mentioned were ingenious at cutting costs, and in the process they supported the development of Japanese producers' goods, but they were also getting help, probably indispensable help, from tariffs.

SWEDEN IS AN EXAMPLE OF A SMALL NATION THAT used tariffs to countermand the faulty feedback of its currency. At the time Swedish tariffs were instituted, about a century ago, the country was an important international exporter of timber, fish, and ore, but was relatively poor and backward compared with much of Europe, whose volatile intercity trade Sweden was slow to enter. Swedish tariffs were wide-ranging and stiff, and were even applied (in part out of political pique) against the few Norwegian manufactures of the time, mostly produced in the little city of Bergen. Norway was then under Swedish rule, and the tariffs directed against its manufactures ultimately led to its secession, in 1905.

Many countries whose cities are automatically deadened by the inappropriate feedback they get from rural-based or resource-based currency values are former colonies—but by no means all of them are. Some, like Portugal and Turkey, are decadent, poverty-stricken seats of former empires—but not all are poor. The oil-producing nations that are economically backward all have cities afflicted by inappropriate feedback. The way the Shah attempted to overcome Iran's backwardness, by buying the artifacts of development, was futile—but relying upon indigenous development combined with free trade would also have been futile.

Tariffs, necessary though they are in nations with undeveloped or long-stagnant cities and appreciable international trade in resources or rural products, are far from an ideal remedy for faulty and deadening feedback to cities. Tariffs create obstacles of their own to volatile intercity trade. They are particularly hazardous for small countries, because the cities of small nations need heavy and volatile trade with cities across national boundaries, and tariffs invite retaliatory barriers. And, in large nations or small, tariffs victimize rural economies. In Canada, most international exports are agricultural or resource goods, and on this trade rests the international exchange value of Canada's currency. The city benefiting most from Canadian tariffs is Toronto, and, naturally, it is hated by Canadians in the supply regions of the country. They call it Hogtown and see national tariff policies as something rigged to drive up their own costs of living for the benefit of Toronto. They are right, and yet Canada would be an extremely poor and backward country without tariff protection.

Singapore as a British-ruled colonial city was backward. It might well have continued to be handicapped after its nation, the Federated Malay States, gained independence in 1963, because the country's international exports were primarily rural and resource products, such as tin and rubber. However, in 1965 Singapore, with its predominantly Chinese population, was expelled from Malaysia, as the country is now called, because in the eyes of the mostly rural Malay population of the other parts of the country Singapore was an undesirable foreign body.

As a sovereign and independent city-state, Singapore has a currency that reflects its own trade situation. Furthermore, with its expulsion, the anomaly of a shared national "brainstem" vanished. Singapore doesn't need to cheat the rural Malays of their rightful import earnings for the sake of its own development; but neither is it deadened by inappropriate feedback from a generalized Malaysian currency. Singapore has to earn its own imports, or it won't have them, and to generate its own exports, or it won't have them. Appropriate feedback helps it to do both and to replace imports as well. In feedback terms, Singapore is a nice, well-made piece of equipment, with a mechanism (its currency) to carry information and trigger responses, and a mechanism to respond (its capacity to produce), forming a sensitive, self-correcting economic

unit. Hong Kong is another such unit. And Taiwan and South Korea are not badly off either, in the terms that I have been discussing, since their international trade does not consist chiefly of rural or resource-based exports. Thus these Pacific Rim economies have built-in advantages lacking in most economies that attempt to develop.

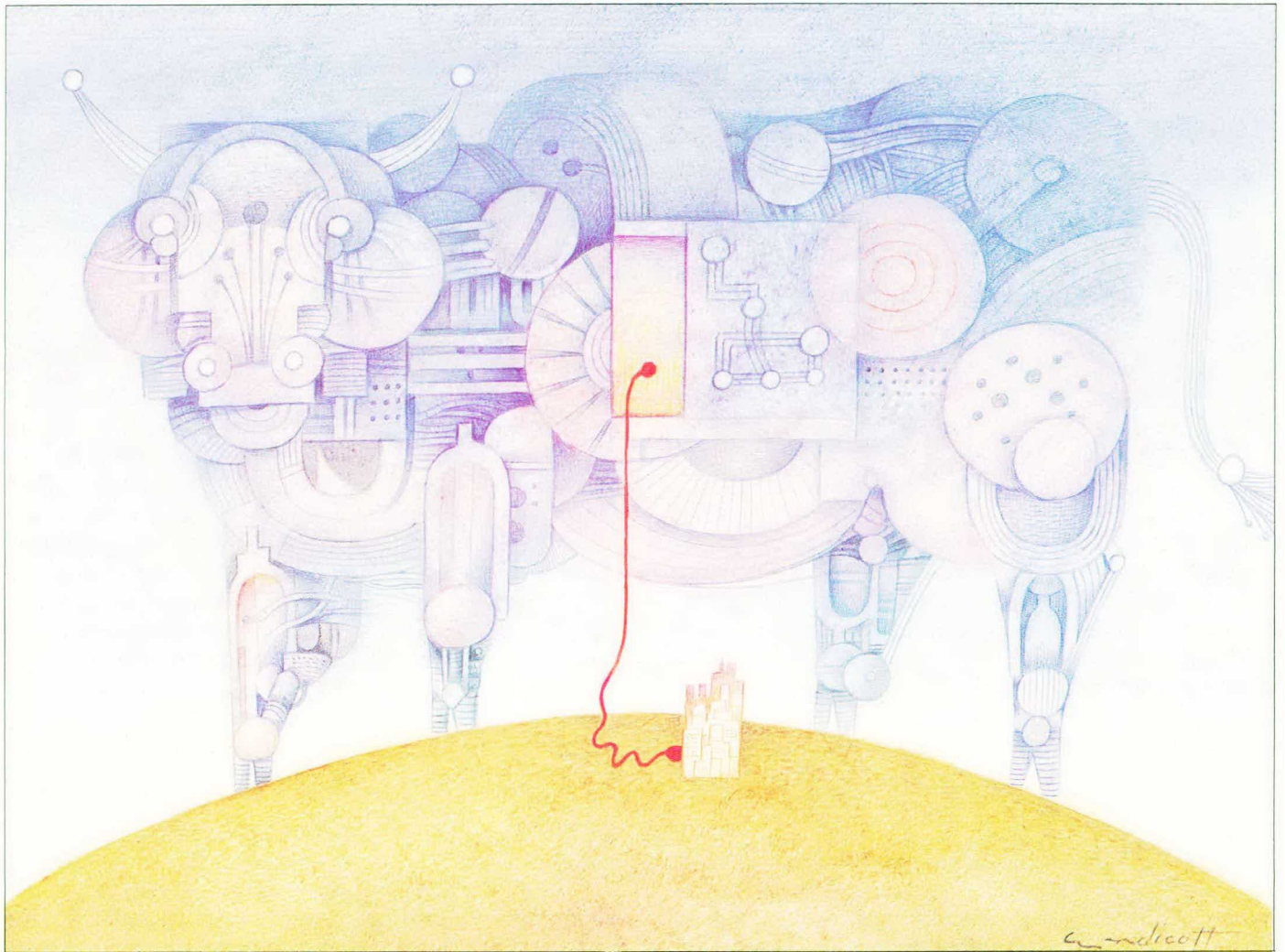
The fact that city-state currencies have often prevailed when major development has been getting under way suggests that national currencies may be fatally premature in some parts of the world now. South America comes to mind. To be sure, the emergence of sovereign city-states in South America, at the expense of existing national arrangements, is wildly unlikely. But it is also wildly unlikely that the nations of South America will achieve solid economic development or self-correcting economic stability.

Once a nation has managed to develop vigorous city economies, or has acquired them in the course of political consolidation or military conquest, troubles with faulty feedback are not over but merely take other forms. For these difficulties, not even makeshift remedies such as tariffs are available. Countries with such troubles must simply live with them and ultimately decay and die with them.

ONE MIGHT SUPPOSE, OFFHAND, THAT THE CURRENCY of a country that enjoys a big international trade in city-made exports, as opposed to rural or resource goods, would be a currency helpful to all the different cities in the country. But, unfortunately, it doesn't work that way, because of the very fact that the cities are different. Cities have their own individual timing for replacing imports and also for generating innovative exports. To experience a significant episode of import replacing, by definition a city must first build up a critical unstable mass of potentially replaceable imports. The cycle of a vigorous city, one that maintains its vitality generation after generation, seems to run like this: first comes a period in which it generates diverse exports, in the process earning an increasing diversity and volume of imports; second, as export generating dies down, a significant explosion of import replacing (provided a critical mass of replaceable imports has piled up—otherwise there is merely a decline); third, a period in which potential new exports, often incorporating innovations, are generated in the city's now greatly enlarged and diversified internal economy; fourth, a period of vigorous export generating and of earning wide ranges and great volumes of new replaceable imports—in other words, a return to the first phase of the cycle and a preparation for repeating the second phase.

In some cities, at some times, the phases follow each other very rapidly; in others the changes occur slowly; but, rapid or slow, this is the cycle that keeps their economies going.

The cycles of cities in volatile trade with one another do



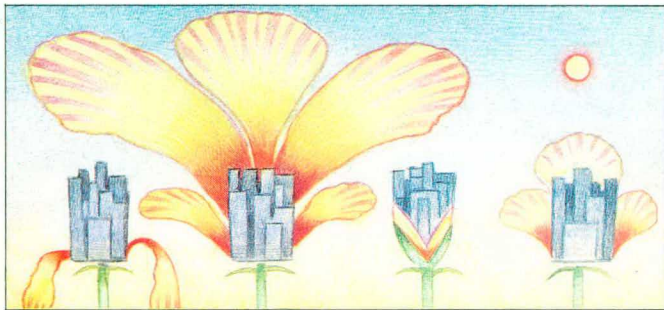
not correspond; rather they intersect constructively at their different phases. If all the cities of a large nation engaged simultaneously in explosions of import replacing, the joint economic boom would be horrendous, frantic, and probably so impractical that it would choke itself off from lack of materials, workers, and sheer time to solve practical problems before they became overwhelming. But, in any case, such an unbalanced, simultaneous expansion can hardly happen, because cities tend to require differing phases of one another's cycles. A city generating unprecedented exports needs customer cities that are replacing imports and therefore shifting to new import purchases, because those cities can afford innovative goods and are the best initial customers for such goods. Cities just getting started have historically often depended for their chance at life upon older cities replacing imports and shifting their purchases to exotic new goods or to rural supplies.

Now let us return to the goofy arrangement of different individuals hooked up to one brainstem breathing center, but this time let us imagine an elephant hooked up with three sheep, two puppy dogs, and a rabbit. Whose carbon-

dioxide level is going to govern the brainstem trigger?

Whichever city in a nation happens to be contributing most heavily to the international export trade is likely to be the city whose needs are best served by the national currency. Any city with that edge probably gets cheaper foreign imports when its own economy can benefit from cheaper imports and probably gets an automatic tariff and export subsidy (with respect to foreign trade only) just when it needs such help. If one city gets an edge of that sort, even a small edge, we must expect that the advantage will make its economy more vigorous and more successful than those of other cities in the nation. The edge, once gained, must logically be self-intensifying and self-reinforcing, because the more economically successful that city is, the more heavily its production will weigh in the total national production and total foreign trade of the nation's cities. The more heavily it weighs, the more closely the feedback from the national currency will suit that specific city. But it won't coincide with other cities' needs and the timing necessary and natural to them; it may even contradict them outright, and certainly must deaden them. Naples has little influence on Italian international trade

and hence on the country's currency fluctuations as a consequence of the trade. Milan and the great overlapping conglomeration of city regions of which Milan forms the nucleus have an enormous effect upon Italy's international trade. With which city's needs and timing will the national currency's fluctuations best coincide?



WHAT I HAVE JUST BEEN PRESENTING IS A HYPOTHESIS. If it is correct, what we should expect to find in a nation with a large international trade in city goods is not a nation of many city regions—as one might offhand expect—but rather a nation with one overwhelmingly important city and city region, along with a collection of other cities that are feeble at generating regions of their own. And we should expect that with the passage of time the one “elephant” city would become increasingly dominant economically and the others increasingly passive and provincial.

That is the pattern the feedback anomaly I have been describing ought logically to produce, and that is indeed the pattern that typically exists and grows more marked with the passage of time. Great Britain, for several centuries, was the pre-eminent example of a country that heavily exported city-produced goods and services. But as the trade built up and London and its city region became ever more important economically, the second city of Great Britain, Glasgow, and the second city of England itself, Manchester, failed to generate city regions of any significance. Birmingham generated one, but it was in no way comparable to London's.

In Germany before its postwar partition, Berlin had become ascendant. With most of Berlin gone, West Germany's cities are today nearly equal with one another, but if the usual pattern works itself out, only one among them will eventually possess a strong and intensifying city region, and the others will become economically ever more inert and provincial. In France, only Paris has a significant city region now, in contrast to the country's so-called eight great peripheral cities: Marseille, Lyon, Strasbourg, Lille, Rouen, Brest, Nantes, and Bordeaux.

The pattern is distinctly national. For instance, the Scandinavian countries among them have less than half the population of France, and little more than southern France, which lacks any city region whatever. Yet each of the Scandinavian countries—Finland, Sweden, Norway,

and Denmark—does manage to have a significant city region. In these small countries, on a small scale, one finds the same pattern as in the larger countries I have mentioned. For example, as Denmark has built up its international trade in city-made goods and services, only Copenhagen has generated a significant region. Odense, Aarhus, and Sønderborg all are economically passive and provincial. In Sweden, development of Stockholm and its region has not implied comparable development for Göteborg.

The Netherlands presents an interesting and fortunate variation on the customary pattern. Its two largest cities, Amsterdam and Rotterdam, together with most of the country's small cities and many of its towns, have jointly formed a single overwhelmingly important region, which the Dutch call Ring City, because the amalgamation of cities and their joint city region forms a horseshoe around agricultural land and the inland sea. Partly because the cities originally formed on the coast and other peripheries of the farmland, and partly because the Dutch have had the good sense to save their most fertile land for farming, the cities pushed their regions around the ring and, instead of invading the hole, filled the interstices in the great ring. Although the country's city and city-regional development is well distributed in this fashion, rather than occurring in one single lump and leaving the rest of the country relatively poor, the fact of one great city region, Ring City, obtains here, too.

I suspect that what is happening in Japan is similar to what has happened in the Netherlands and in the north of Italy, although the configuration of the great Japanese urbanized region, with Tokyo at its nucleus, resembles neither a ring nor one fat lump but rather a huge, lopsided bow tie, with the knot at Nagoya. Tokyo and its region form only a part of this whole, much as Amsterdam and its region form part of Ring City, and Milan and its region part of the heavily urbanized north of Italy. We might logically expect Japanese cities that lie beyond this dominant urbanized region to become economically passive as time goes on, rather than proceeding to develop vigorously and to generate their own city regions. And indeed, there are now unmistakable signs of just that.

It seems as though some force is bent upon transmuting multi-city nations with very different histories, populations, and geographical sizes into something resembling city-states—that is, states overwhelmingly dominated by single city regions and their cities. That force, if I am correct, is the faulty feedback exerted by the consolidated national currency.

For a small country, transmutation into something resembling a city-state is not necessarily destructive. If the country is very small, like Denmark, or if it has a sufficiently large dominating urban region, like Ring City in the Netherlands, the nation can get along economically with its single elephant-city region. But even in small countries, the pattern exacts its penalties. Most of Den-

mark, for example, remains relatively poor and must be heavily subsidized by Copenhagen and its region.

A large nation transmuted into something resembling a city-state is a different matter. The many cities that grow more inert and provincial as time passes don't pull their weight economically. They don't make good domestic customers for the dominant region. As other cities stagnate, the dominant city and region must subsidize them, and the subsidies, being unearned, don't create self-generating growth, so the drain goes on interminably. Ultimately, most of the nation becomes incapable of supporting itself, or can do so only badly.

The elephant-city-region pattern, even in a small country, can create resentments and exacerbate ethnic bitterness or hatreds. For instance, in Czechoslovakia before the Second World War, Prague, the city of the Czechs, was dominant and steadily becoming more so. Bratislava, the city of the Slovaks, was relatively inert and provincial, and becoming more so. The Slovaks attributed the difference to political and cultural favoritism on the part of the government. The envy and anger this nurtured helped divide Czechoslovakia during the war and help divide it now.

Cities within a nation get no feedback whatsoever from the national currency with respect to their trade with one another or, of course, their domestic trade with regions that lack cities. This means that in a country with very little international trade relative to domestic trade, cities get virtually no feedback. While this lack may not deaden them, neither does it help correct or rejuvenate them when they falter. A physical analogy would be an object in equilibrium on a hill. As long as its equilibrium goes undisturbed, it can get along without feedback and maintain its position. But once it becomes even slightly out of balance, it is then downhill all the way. Just so, when the decline of a city getting no feedback does begin, the decline typically proceeds thereafter, uncorrected.

Throughout most of the history of the Chinese Empire, Chinese cities have had no feedback. Chinese tradition has it that the empire was formed of fifty-five provinces, unified under one of them, Ch'in. The provinces, in turn, are reputed to have been formed earlier of some 1,700 little city-states and principalities. That figure may or may not be true, but that a big unit was made of many smaller units is certainly true. Long before the empire was more or less solidified (repeatedly, it was militarily unified, broken apart, militarily unified, broken apart, militarily unified, broken apart), all the bases of China's artistic and material culture were developed: languages, writing, literature, philosophy, art, music, silk culture and weaving, embroidery, ornamented pottery and other ceramics, highly sophisticated metallurgy in both bronze and iron, boats, chariots, bricks, bells, wine, chess, magnets, fishnets and all the other essential fishing and agricultural implements, astronomical observations, codified laws, currencies, and much, much else. After unification, China never equaled its earlier talent for development or fulfilled the promise

that it implied. So immemorably stagnant did its cities become that by this century some 80 percent of its population was rural.

After Rome came to rule most of the world known to Rome, and the economic control of the empire became more centralized, the individual cities received less feedback. After the Western Empire disintegrated, the Eastern Empire long persisted. It too was relatively centralized and self-sufficient, trade with Venice notwithstanding (although that trade loomed large in Venice, at first it figured little in Byzantium). The Ottoman Empire, which first took over the ruins of the Byzantine Empire and then extended farther, was also relatively self-sufficient, and its cities received little feedback from the outside world. The historical fates of huge, unified realms don't hold much economic promise, to put it mildly.

THE OUTSTANDING MODERN EXAMPLE OF SUCH A realm is the United States. After the tariff policy had overcome the initial feedback flaw that afflicted the country, the United States became a nation whose currency gave cities almost no feedback on how their own trade was doing. The flourishing northern cities proceeded to produce for one another and for the country's regions lacking cities, and to make little for the world outside. Most kinds of foreign imports that arrived were swiftly replaced with local production in this city or that one, and the reproductions, adaptations, and improvements were sold as domestic products. The goods and services of their own devising that American cities cast up, often truly unprecedented goods and services and often ones that solved very important practical problems, also went overwhelmingly into domestic trade. In time, to be sure, American manufactured exports, along with services such as engineering and equipment installation, loomed large in some of the countries receiving them (Uruguay, for one), but they did not loom large in the total production and trade of American cities. As the American cities burgeoned, the rural international exports that had once so threatened their economies lost their importance to total trade. American cities themselves became the chief markets of the country's rural products. The cotton went increasingly to the mill towns of New England in Boston's orbit, and then to industries transplanted south from New England. The tobacco went increasingly to American manufacturers and, ultimately, consumers. Beef cattle and hogs went to packing houses in Kansas City and Chicago, then later to rural and small-city packing houses—in either case mainly for consumption within the nation. The country's domestic trade hovered at about 95 percent of its total trade, foreign and domestic, and sometimes exceeded that.

With no admonitory feedback from the national currency, American cities flourished, but only up to a point. All cities tend to have their runs of bad economic times, for reasons ranging from unavoidable bad luck to outright

shortsightedness, folly, and overspecialization. Furthermore, every city's already-established export work dwindles over time. A city that loses export work without compensating for the loss is a city doomed to decline. Such a city needs help and needs it fast, needs the equivalent of tariffs and export subsidies. No city can get this in a country like the United States. Although American cities were able to build up their economies to an astonishing degree with no feedback help (other than the tariffs that countermanded false feedback information), they have had no means of self-correction whenever they have begun to lose important export work.

Today, so many American cities are stagnant and in economic decline that the stagnation and decline are acknowledged to be "national" problems. But taken individually, American cities have been stagnating for a long time now. The first of the major cities to stagnate decisively was probably Pittsburgh, at about the turn of the century. During the eight decades since, city after city has been stagnating and not pulling out of it: little cities like Rochester, Utica, Scranton, Akron, Toledo, Wilmington, Camden; larger cities like Buffalo, Cleveland, Indianapolis, Seattle, Detroit, New York. New York's economy has been declining since at least the 1940s, and yet never did a city have better responsive equipment with which to make corrections than New York did then. But the corrections weren't made, and now much of the responsive equipment itself is lost—the versatility at producing, the range of producers' goods and services, the skills—and much of what remains is obsolescent. One among many symptoms of the city's growing poverty is that today it cannot afford to repair its rundown subway system, water-supply system, and roads and bridges, although in the days when the city was economically vigorous it was able, from its own revenues, to carry the capital costs of creating these great systems, and much more.

In the meantime, the Sun Belt cities of the American South and West have been rising, and this would be all to the good except that in large part their economic bases consist of military production and of exports to backward client states. Military production and international trade in sophisticated goods from advanced to backward countries are profoundly dead-end forms of economic activity. They are not so much means of development and expansion as they are means by which to temporize with economic sluggishness.

Since about 1960 in the United States, the proportion of international to domestic trade has gradually been rising, to about 15 percent in 1980. American exports increasingly

consist of agricultural exports such as soybeans and wheat. New manufactured exports go largely to client states, in many cases on credit, and increasingly consist of military goods. New imports, for the most part, consist of city-made goods with which American goods can no longer compete in quality or price. Imports arriving from Japan are increasingly made by methods that render American producers' equipment and techniques obsolete. Thus it is not surprising that clamor grows for new tariffs or for negotiated quotas on foreign manufactured goods. But American cities are not suffering from the contradictory currency feedback that tariffs can countermand. They are suffering, rather, from failure to correct their own economies, and as one after another has stagnated they have been letting one another down. Tariffs are no remedy for that form of city failure.

One might say, except that it implies an undeserved censure, that American cities have suffered badly from lack of economic discipline: the discipline imposed by currency fluctuations, or, if we prefer, the opportunities presented by currency fluctuations. These can make it possible for a city's falterings to be merely temporary. But uncorrected, faltering becomes final. The failure is not the fault of the cities, the government, or the American people. It is a structural flaw that comes with the territory. We must be grateful that a world government and a world currency are still only dreams.

I do not mean to imply that currency fluctuations are the only determinants of whether a city, and its region if it has developed one, can repeatedly replace imports and vigorously generate exports. The fact that we must inhale and exhale doesn't mean that we live on air alone. Other factors are important too. Nonetheless, currency fluctuations are a powerful force, a potent form of feedback control, for good, for ill, or for nil.

As far as I can see, there are no remedies that a city or a nation can apply, short of separations (in the pattern of Singapore), for correcting the flaw I have hypothesized as leading some cities to become elephant cities while deadening others, and none for correcting the lack of feedback. But that doesn't mean that nations don't try to remedy, countermand, or compensate for the exasperating stagnation of their cities and decline of their economies. They typically try hard and ingeniously to do just those things. But, as we shall see, their efforts tend to be worse than futile, for they only deepen and hasten widespread city stagnation and decline, unwittingly piling further structural economic flaws upon the built-in structural flaw of faulty or missing feedback to their cities. □

This is the first of two articles on the world economy.

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