Ducks and Drakes

It is to be hoped that only pre-Keynesian bankers will be dismayed at the discovery that it has been necessary to restrict the convertibility of the United States dollar. Elsewhere in the world, there is plenty of recent experience to show that the most upright and high-minded people can survive the shame even of devaluation, a much more conspicuous way of passing over the claims of creditors than the package announced earlier this week in Washington.

To be sure, there are two other components of recent memory that will make those outside the United States uneasy. First of all, draconian as Mr Nixon's proposals may appear, they resemble all too closely the kinds of stratagem that British Chancellors of the Exchequer have been forced to use in the past few years in the attempt to avoid full-scale devaluation, so that even those who wish Mr Nixon well may be tempted to hedge their bets by converting whatever dollars the system will now allow. The second vivid memory is the histrionic quality of what is called the crisis through which it is now said the world is passing. If reason has any place in monetary affairs at all, events of the past week are most of all remarkable not because it has been necessary to hedge about the relationship between the dollar and other currencies but because the United States has been able to keep on buying gold at one ounce for $35 for more than a quarter of a century. How can it be that a numerical relationship established in 1946 at a remote village in New Hampshire should have persisted so long?

The first thing to be said is that the relationship between gold and the dollar has been in itself artificial. President Franklin D. Roosevelt is said to have left the gold standard in the early thirties, but nobody really knows what that means. Each decade there seems to be another crisis of conscience in the United States, and each time there seems to be a reaffirmation of the view that gold and the dollar must (at some price) be at one. The affection of the United States for gold is, of course, a powerful stimulus of the gold-mining industry but in reality the objective is not so much to provide an absolute monetary standard but rather to relate the prices paid in dollar bills for commodities imported or exported to a quantity of material which can be reckoned to have a fixed value on a time scale which is longer than the interval during which commercial transactions between nations are settled. In other words, the function of the relationship between the dollar and the price of gold has been to provide a yardstick by means of which currencies might be converted. Its disadvantage has been that stocks of gold, sometimes many times the nation's Gross National Product in value, have also been given their face value.

What can scientific research and development contribute to a solution to this problem? The most obvious device would be relating the value of the dollar not to gold but to some naturally radioactive material, preferably one with a lifetime comparable with the lifetime of a human generation (so that hoarders would not feel too cheated) but not so great that jackdaw nations could dominate the international monetary scene to a degree not matched by their current economic performance. (In some quarters, it will be a shock to know that strontium-90 appears to have a suitable lifetime.)

These, however, are devices which share with the monetization of gold the defect of being symbolic. Why not instead seek means by which currencies are converted into each other at rates determined by the current economic performance of the countries concerned but smoothed out over an interval of time (say three months) so that commercial transactions would not be seriously impeded? By now, the economic textbooks are thickly peppered with proposals of this kind, some of them known by the unedifying name of the crawling peg. It is almost beyond belief that in a world which chooses to rack its conscience regularly on the issue of whether the profession of science is sufficiently responsive to social needs, economists and bankers should be allowed such licence as they assume in the handling of the international exchanges. At this point, few people may be able to guess how much gold to swap for dollars three months from now, but it is a near-certainty that by then each ostrich will once more have buried his head firmly and, he hopes, permanently in the sand again.

100 Years Ago

CLIFTON COLLEGE SCHOOL OF NATURAL SCIENCE

The accompanying is one of these fortnightly papers :—

MAGNETISM

1. Soft iron can never be permanently magnetised, yet a piece of soft iron in contact with a magnet becomes a magnet. Why?
2. What do you understand by *coercive force*, and magnetic *saturation*?
3. How is magnetism influenced by heat?
4. Mention the substances which are attracted by a magnet in addition to iron.
5. State one or more of the methods by which steel bars may be magnetised.
6. What is the *declination* or *variation* of the magnetic needle, and the present extent of it?

CHEMISTRY

a. For First and Second Sets, Modern Side only.

1. Mention the oxygen compounds of phosphorus, and the action of water upon them.
2. Give an account of arsenicum and its chief characteristics.
3. What are the constituents and characteristics of arseniuretted hydrogen?
4. What is "white arsenic," and how may it be prepared?
5. You are given a liquid suspected to contain arsenic; by what means would you examine it?

b. For all other Forms.

1. Ammonia gas, and hydrochloric acid gas, are brought into contact: what is the resulting compound, and to what may it be compared?
2. What is *ammonium*? Describe the formation and appearance of ammonium amalgam.
3. What do you know of chloride of nitrogen?
4. What is nitric acid, and by what means may it be procured?
5. State the action of nitric acid upon metals,—copper, tin, antimony,—and the general tendency of the acid.

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