

第六课 科学与国际合作

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Unit 6

SCIENCE AND INTERNATIONAL
CO-OPERATION

One of the most striking characteristics of modern science has been the increasing trend towards closer co-operation between scientists and scientific institutions all over the world.

5 What have been the reasons for this? One of the factors has already been discussed in Unit 5, i.e. the growing complexity and widening scope of present-day research, which has resulted in the creation of large organizations employing great numbers of scientists and technologists in programmes of directed research. This has inevitably led to the extension of many items of research

10 beyond national boundaries.

The most important factor, however, has been the magnitude of the problems to be solved. In fact, it is becoming more and more evident that many of the problems affecting the world today cannot be solved except by the pooling of scientific effort

15 and material resources on a world-wide scale. The exploration of space, world finance and the development of new sources of power, such as atomic energy—these are examples of areas of scientific research which are so costly and complicated that no single country or organization, working by itself, can hope to tackle them efficiently.

20 A third powerful reason has been the increasing political and economic interdependence of nations, both rich and poor. This has had a direct effect on large areas of scientific and technological investigation, such as those connected with armaments,

25 communications, health, agriculture, economic planning and sociological research.

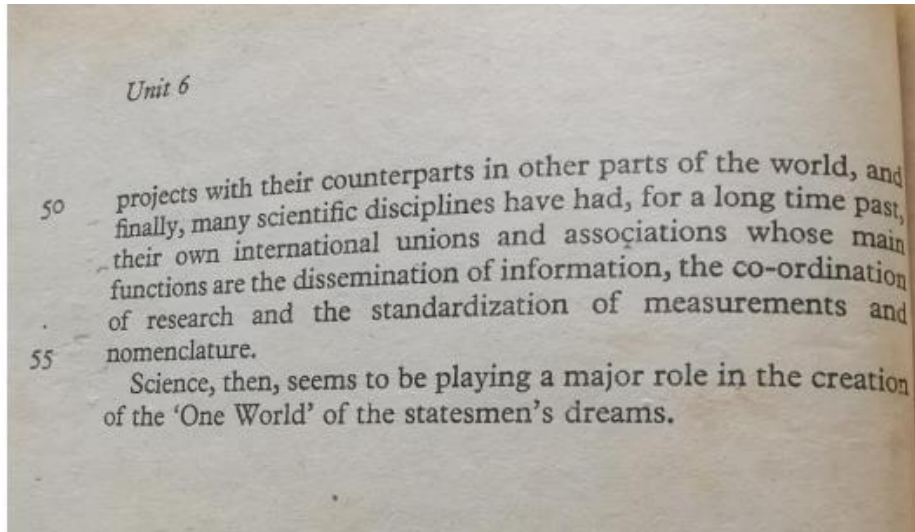
As a result of the conditions outlined above, international co-operation has been greatly intensified during the last 20 years, largely owing to the initiative of the United Nations Organization (U.N.O.) and its specialized agencies, in particular the

30 United Nations Educational, Scientific and Cultural Organization (UNESCO). Thus the most urgent problem for many parts of the world, i.e. food production, is being dealt with by the Food and Agriculture Organization (F.A.O.). The World Health Organization (W.H.O.), another U.N. agency, not only co-ordinates many research projects on medicine all over the world, but supplies advice and aid in the control of diseases in underdeveloped areas. Technical and economic assistance is provided by other U.N. bodies such as the Economic and Social

35 Council (ECOSOC) or the Economic Commission for Latin America (ECLA) and similar agencies for other regions of the world.

40 Apart from the international agencies controlled by the U.N., many scientific and technological organizations, both governmental and privately owned, are pooling their resources and incorporating themselves into supra-national bodies: a good example is the Organization for Economic Co-operation and Development, with over 20 member-countries throughout the world. Universities, too, are tending to develop joint research

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全世界的科学家和科研机构日趋紧密的相互合作，业已成为现代科学的最显著的特征之一。

造成这种趋势的理由是什么呢？其中一个原因已经在第五课中讨论过，即：现代科学研究日趋复杂，涉及面愈加广泛，从而导致了雇佣大量科学技术人员从事定向研究的庞大机构的诞生。这就不可避免的导致许多科研项目扩展延伸至超越国界。

然而，最重要的因素一直是有待解决的问题的规模。事实上，越来越清楚的显示，只有在全球范围内集中科技力量和物质资源，才能解决影响当今世界的诸多问题。太空探索、国际金融以及新能源，如原子能的开发——这些科研领域的实例，耗资巨大且纷繁复杂，任何一个国家或组织仅凭一己之力皆无望圆满应对。

第三个强有力的原因是，无论富国还是穷国，国家之间在政治和经济上的相互依赖日益增强，在广泛的科学和技术研究领域产生了直接影响，例如那些与军备、通讯、健康、农业、经济计划和社会学研究有关的领域。

上述状况导致的结果是，国际合作在过去 20 年间得到极大的强化，主要归功于联合国组织 (U.N.O.) 及其下属专业机构，特别是联合国教科文组织 (UNESCO) 的带头作用。由此，世界很多地区最为紧迫的粮食生产问题，经由粮食及农业组织 (F.A.O.) 得以应对处理。另一个联合国机构，世界卫生组织 (W.H.O.)，不仅在世界范围内对许多药品研究项目的工作进行协调，而且还向欠发达地区提供控制疾病的建议和援助。技术和经济的协助由另一些联合国机构提供，如经济及社会理事会 (ECOSOC) 或拉丁美洲经济委员会 (ECLA)，以及世界其它地区的类似机构。

除了由联合国控制的国际机构之外，许多政府和民间的科技机构把他们的资源和团队汇聚成跨国组织。由世界 20 多个国家组建的经济合作与发展组织，即是一个很好的实例。大学也倾向于与世界各地的同行联合开展研究项目。最后一点，长久以来，很多学科形成了自己的联盟和协会，其主要作用是信息交流、科研协作、度量标准化以及术语的统一。

可见，为实现政治家们“世界大同”的梦想，科学似乎扮演着一个主要的角色。