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Exclusion, Inclusion, and Enclosure: Historical Commons and Modern Intellectual Property

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Summary. — The global debate over intellectual property rights (IPR) relating to genomics, software, and scientific information has divided developed and developing countries in international fora. Fundamental issues undergird these debates: who is to be excluded from various kinds of information, and who is to be included in the benefits of these ideas? An insight into these issues may be gained from the history and theory of property rights in land, especially the enclosure of lands held in common. After considering successful examples of common property, the paper considers the modern debate over common intellectual property.

Key words — Europe, Great Britain, common property, biotechnology, enclosure, open software

1. INTRODUCTION

The global debate over intellectual property rights (IPR), especially relating to genomics, computer software, and scientific data, has divided developed and developing countries in the World Trade Organization (WTO) and other international fora. This complex debate involves negotiations over trade rules, copyrights, and patents. Yet a fundamental question underlies the debates: who is to be excluded from various kinds of information, especially intellectual property defining rights of access, even to life itself? And who should be included in the benefits of these ideas? Our thesis is that insight into this issue may be gained from the history and theory of property rights in land, especially the enclosure of lands previously held in common. Because the history of common property is seldom carefully examined or compared (until recently) to debates over intellectual property, we seek to develop and amplify this comparison.

The article begins with a brief review of the enclosure of land and the widely cited notion of the Tragedy of the Commons in both Great Britain and the less well-known history of the commons in Italy. We document a successful example of common property with a pedigree stretching back to 1,000 years. We then consider the modern version of the debate over intellectual property in genomics, open software, and scientific data. We conclude with a synthesis in which the two faces of enclosure—to be excluded and to be included—are brought together in an argument favoring wider applications of common rights to

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intellectual property, especially in developing countries.

2. THE ENCLOSURE OF LAND

Property rights can take many forms. In the Western tradition dating to Roman law, private property conferred the right *to exclude* others from a stream of benefits or rents. These property rights took the form of exclusive title to land and property and later, patents and copyrights. But the law has also recognized common rights (*res communes*): rights *to be included* in benefits streams as a member of a well-defined group. These rights can be membership in a village, a common property association using range or forest resources, a club, shareholder status in a firm or corporation, and even citizenship. [1] Rights to exclude and to be included are not simply opposites because those who are not included are excluded. They are different types of entitlements. In all markets, and in civil society as a whole, who has the right to exclude others from a stream of rents or profits and who has the right to be included in those streams are different aspects of rules which assure participants and citizens that their expectations will be met (Runge, 1984b).

As Coase (1937) famously observed, even private firms operate internally as a sort of commons, based on rules of exclusion and inclusion which result from shared purposes and goals (including profit) in which tacit understandings and norms obviate the need for transactions and contracting that would be necessary in dealing with "outsiders." [2] These outsiders are excluded, while owners and shareholders are included in the benefits to the firm. The interest here is to consider the balance between the negative right to exclude others from certain benefits by enclosing property, and the positive right to be included in such a stream of benefits.

Rights to exclude others from landed property evolved in an historical process known as enclosure. Enclosure referred to the conversion of common or open fields into private, exclusive parcels on which sole proprietorship gave rents and/or management decisions to individual owners (Williamson, 1987). The origins of communal or common land use are obscure; most commentators trace the organization of the open field systems of common arable land in the British Isles to the period after the Norman Conquest (Rackham, 1986, pp. 155–179). Their organization was preceded by earlier enclosures using low stony banks (reaves) dating to the Neolithic period, which were overlaid willy-nilly by Celtic fields with high banks, Roman division into squares of 775 yards (*centuriation*), and other regular Anglo-Saxon fields. Common arable land grew up after 1066; Fox (1981) concludes that open field commons was widespread and in working order by 1300, and took a similar form in "English, Scandinavian, Welsh, and Gaelic cultures, and on the Continent in French, Germanic, Slovenic, and Greek lands" (Rackham, p. 178). The system may have peaked about the time of the Black Death (c. 1350), when it accounted for between a third and a quarter of England's land area. What remained of common arable land was largely abolished by a series of Parliamentary Enclosure Acts during 1720–1840.

Common or open fields included large areas for crops, divided into narrow strips cultivated by individuals. After harvest, these fields were opened to common grazing, but with restrictions on who and how many cattle could graze according to a "stinting" rule. A second type of common land was meadow, with individual use rights for hay and fodder, which after harvest was again opened to common grazing. Third was common waste: permanent pasture open to all those entitled to graze there. In these types of common property, inholders of enclosed land might coexist. However, wholesale enclosure replaced this system, "characterized by a mixture of private property rights and common usages, with the system of private property prevailing today, in which an owner or tenant has virtually exclusive rights" (Shaw-Taylor, 2001, p. 642). The most active phases of enclosure began in Great Britain in the 1500s and extended into the 19th century.

Especially in the lowlands of Great Britain, this process was initially connected to the constraint to arable agriculture represented by excess water and flooding on the flat coastal plains of Norfolk, Huntingdonshire, Lincolnshire, Cambridgeshire, and Suffolk. These wet marshes, referred to broadly as "fens," required drainage to be converted to arable fields and pastures. Darby, in his classic *The Draining of the Fens* (1956), emphasized that such drainage provided an early and profound example of environmental engineering driven by legal orders which prefigured later enclosure movements. As early as 1531, Henry VIII empowered a Commission on Sewers to survey