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PROPERTY RIGHTS IN CELTIC IRISH LAW*

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"The laws which the Irish use are detestable to God and so contrary to all laws that they ought not to be called laws. . ."

Edward I of England (1277)

"Leviathan in swaddling clothes"

D. A. Binchy on the Irish *Tuath*

INTRODUCTION

It is impossible at the present time to present a systematic, coherent description of the ancient Irish law of property. The reason is that a considerable portion of the sources have not been published in modern scientific textual editions and translations. The principal sources used repeatedly by historians in the 19th and early 20th centuries are the multi-volumed editions of the old Irish law tracts edited and translated by Eugene O'Curry and John O'Donovan and published posthumously by other editors between 1864 and 1901. While both these pioneer scholars were competent in their understanding of Middle and early Modern Irish, the language of the glosses and commentaries, neither was able to cope too successfully with the archaic and very technical terminology of the Early Irish texts of the law—the oldest and most valuable strata for understanding Irish legal concepts and principles. The later editors of the O'Curry - O'Donovan transcriptions and translation were, with one exception, almost wholly ignorant of the Irish language, and the result was that their footnotes were misleading and inaccurate, their introductory essays teemed with misinterpretations, and the printed texts themselves were full of glaring errors.[1]

Scientific study of the Irish law tracts had to await the development of Celtic philology. This was begun in the early 20th century through the interest of the German Celticist Rudolph Thurneysen, the English linguist Charles Plummer and the Irish historian Eoin MacNeill. These three undertook the first really competent study of the difficult Old Irish texts, and more importantly, they trained and encouraged younger scholars to pursue the very difficult linguistic, historical and juristic studies which would prepare them for further study of the law tracts.

Unfortunately, many historians not specializing in the study of the ancient Irish law tracts have been unaware of the textual inaccuracies of the O'Curry - O'Donovan translations and have continued to incorporate their older unscientific work, and that of their editors, into their own work. For example, one of the most commonly cited sources for early Irish history is Patrick Joyce's *A Social History of Ancient Ireland*, first published in 1906 and republished in 1913 and again as late as 1968. This work is notoriously inaccurate; it has no sense of the fact that a chronology of at least 1000 years is being covered during which some changes in social and legal institutions took place. Joyce's book was used between 1914 - 1918 when the great French historian P. Boissonade was preparing his epochal history of social life and work in medieval Europe. Thus Boissonade speaks of "the soil of Ireland (belonging) to 184 *tribes or clans*. . . .the clans held the land in

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common. . . .no man held individual property save his household goods, and each held only the right of usufruct over his strip of *tribal* domain. . . in each *district* of Ireland the free population lived *communistically* in immense wooden buildings . . . . they lived and fed in common, seated on long benches, and all the families of the district slept there upon beds of reeds. . .". One can see immediately that the writer is using the words "tribe", "clan", "tribal domain", "district" and "population" equivocally, leading to great confusion. Almost every part of this passage is incorrect or very misleading.[3]

We might ignore Boissonade's errors except they are typical of many other secondary sources including the *Cambridge Economic History,* whose editor Eileen Power, incidentally, translated Boissonade's work into English in 1927. Worse yet, this translation was reprinted as a Harper Torchbook in 1964 and circulates widely in American colleges, perpetuating errors dating back more than 60 years.

Even when native Irish authors like lawyer Daniel Coghlan attempted to write a systematic description of land law under the ancient law tracts, his work was described by a scholarly reviewer as "inaccurate and unreliable, of little value".[4] Despite nearly 50 years of persistent and rewarding scientific study of the Irish law tracts by professionally competent philologists and jurist-historians, a recent historical work appeared which ignores all that has been published on the problem of Irish land law in the ancient law tracts, and in a chapter entitled "Celtic Communism" repeats all the inaccuracies of Joyce[5]

Under these circumstances, conscious of my own lack of knowledge of the Irish language, and keenly aware of the shoals that await the historian who is not expert in this highly specialized field of study, I have deliberately avoided all reliance upon authorities who are not themselves trained in Irish language and history. I am not presenting a coherent systematic review of the Irish law of property; I am presenting a review of what the most competent Irish scholars of the last half century have discovered since they applied modern scientific philological and historical standards of criticism to the ancient Irish law tracts.

My survey of the literature indicates that (1) private ownership of property played a crucial and essential role in the legal and social institutions of ancient Irish society; (2) that the Irish law as developed by the professional jurists—the brehons—outside the institutions of the State, was able to evolve an extremely sophisticated and flexible legal response to changing social and cultural conditions while preserving principles of equity and the protection of property rights; (3) that this flexibility and development can be best seen in the development of the legal capacity and rights of women and in the role of the Church in assimilating to native Irish institutions and law; (4) that the English invasion, conquest and colonization in Ireland resulted in the gradual imposition of English feudal concepts and common law which were incompatible with the principles of Irish law, and resulted in the wholesale destruction of the property rights of the Irish Church and the Irish people.

I

Irish law is almost wholly the product of a professional class of jurists called *brithim* or brehons. Originally the Druids and later the *filid* or poets were the keepers of the law, but by historic times jurisprudence was the professional specialization of the brehons who often were members of hereditary brehonic families and enjoyed a social and legal status just below that of the kings. The brehons survived among the native Irish until the very end of a free Irish society in the early 17th century. They were particularly marked for persecution, along with the poets and historians, by the English authorities. The statutes of Kilkenny (1366) specifically forbade the English from resorting to the brehon's law, but they were still being mentioned in English documents of the early 17th century.[6]

The absence from the function of law-making of the Irish kings may seem startling. But Irish kings were not legislators nor were they normally involved in the adjudication of disputes unless requested to do so by the litigants. A king was not a sovereign; he himself could be sued and a special brehon was assigned to hear cases to which the king was a party. He was subject to the law as any other freeman. The Irish polity, the *tuath*, was, one distinguished modern scholar put it, "the state in swaddling clothes". It existed only in "embryo". "There was no legislature, no bailiffs or police, no public enforcement of justice . . . there was no trace of State-administered justice". Certain mythological kings like Cormac mac Airt were reputed to be lawgivers and judges, but turn out to be euhemerized Celtic deities. When the kings appear in the enforcement of justice, they do so through the system of suretyship which was utilized to guarantee the enforcement of contracts and the decisions of the brehon's courts. Or they appear as representatives of the assembly of freemen to contract on their behalf with other *tuatha* or churchmen. Irish law is essentially brehon's law—and the absence of the State in its creation and development is one of the chief reasons for its importance as an object of our scrutiny.[7]

The bulk of the Irish law tracts were committed to writing in the late seventh and early eighth centuries, and though influenced somewhat by the impact of Christianity, they are basically reflective of the social and legal principles, practices and procedures of pagan Irish society. In the early ninth century, the oldest texts were being glossed because the original meaning was no longer certain, or practice had in fact undergone developmental change. By the 10th century elaborate commentaries were being added which indicate that the texts were either so obscure to the new generation as to be inexplicable, or change had become so marked that the commentaries often contradict the text itself. Part of this confusion was due to the very archaic and technical language of the earliest texts and the subsequent change in the Irish language from what we call now Old Irish to Middle Irish. If we recall the marked differences between the English of Chaucer and that of Shakespeare, we will understand the difficulties of the brehon jurists over a comparable period of time.[8]

To complicate matters further, the earliest Irish texts reflect the existence of several different schools of law, each producing its own particular code or tract. While all the tracts are recognizably Irish in character, they do reflect local, perhaps regional differences; if the evidence were fuller, several local schools might be identified. As of now it appears that a northern and a southern regional affinity can be detected. The fact that in later historical times certain families of brehons were associated with specific *tuatha* or regions suggests that local variations in specific procedures and penalties were almost inevitable. But from the tenth century, the legal fiction arose that the Irish law was a unity and all contradictions were to be explained away by the commentaries. The multiple and competing law systems of the early period were now subjected to homogenization to produce what was considered to be a uniform law for the whole island. And this fiction, like the equally unhistorical claim that there was a single High-King of Ireland—the King associated with Tara—retained its hold on historians down to the application of modern textual criticism in the 20th century.[9]

The conversion of the Irish to Christianity begun in the fifth century was bound to affect profoundly Irish life and institutions. The Christian church was already very Romanized in its institutional and cultural conceptions. It was urban-oriented and, thanks to St. Augustine, had reconciled itself to the Roman conception of the State as part of the natural (if sinful) order of the world. In Ireland Romanized Christians found a wholly rural-oriented society with a barely embryonic conception of the State, and a well-developed legal tradition in which law making was the special function of essentially private persons—a professional class of jurisconsults and arbitrators known as the brehons. Law and order, and the adjustment of conflicting interests, were achieved through the giving of sureties rather than State-monopolized coercion. The Church could not depend upon the Irish kings to compel their people to convert to Christianity nor could they use the State to impose Christian law on an unwilling population. Significantly, the conversion of the Irish was undertaken without State-directed compulsion and not a single martyrdom is associated with the Church's triumphant success.[10]

Without the instrumentality of the State to enforce its commands, the Church's impact on Irish law was still very weak in the sixth century; canonical texts of this period forbid Christians to make use of the brehon's court against one another. They are to resort to the clergy to arbitrate among them as in the pre-Constantinian Church. But the collapse of the Roman empire in the West, and the isolation from Roman influences, coupled with the rise of a wholly native clergy during the period, forced the Irish Church to integrate itself more fully into the native Irish institutions and culture.[11]

In legal tracts dating from the late seventh and early eighth centuries, the clergy are recognized in their seven ranks, with appropriate honor-prices, and other rights and obligations under the law. The right of free men to bequeath property to the Church under certain conditions was recognized, and the right of women to give gifts was also approved by the jurists. St. Patrick had mentioned the practice of newly baptized women placing their gold bracelets upon the altar as a gift, and his practice of returning them. He may have done so to avoid litigation as to their right to make such a gift at this early period when their legal capacity was dubious. The law also ruled out deathbed bequests to the Church as invalid due to possible mental impairment, and the laws on marriage and other sexual relations remained wholly pagan.[12]

The failure of the Church to impose its own will upon the Irish law is best appreciated if one considers the fact that the Church was compelled to create its own legal codes in which a wide variety of criminal and moral practices were outlawed and appropriate penalties assigned. The so-called penitentials of the Irish Church were later carried by Irish missionaries to the continent and became a vital part of the judicial structure of the entire Western Christian Church. Penalties ranged from set periods of prayer, fasting, abstinence, pilgrimage, hermitage, exclusion from the sacraments, and other spiritual acts, to a fixed scale of monetary commutations of these penalties. The influence of Irish secular law, with its dependence upon monetary compensation for offenses under law, seems clear.[13]

One way in which the Church did influence Irish law was by seeking to have the Irish kings and assemblies accept a specific written code of law composed by an outstanding ecclesiastic. The Annals of Ulster for A.D. 778 record that Bresal, Abbot of Iona, and Dunnchad, King of Southern O'Neill "confederacy", had agreed to accept the laws of St. Columcille, founder of Iona, as binding upon their peoples. This was something akin to a treaty or compact governing internal and external relations. The compact publicly committed the people represented here by their king to obey the new law. This is the closest that the Irish got to legislating a system of law. The law codes, always attributed to some saint, represent the intrusion of Christian moral practices into the customary law of the land—the brehons' law. They were largely concerned with ensuring better protection for the persons and property of the clergy, their households, clients, servants, tenants, and ordinary women and children. There were also efforts to impose Sabbath laws. But these new ecclesiastic-inspired codes were thoroughly Irish in structure and principles. As Kathleen Hughes has put it: "The general effect of Christianity upon Irish law was to modify it without dislocating it; its rigidity was reduced and the result was a strengthening of native institutions".[14]

The study of the law texts and the canonical texts has suggested to at least one historian that the existence of two competing law systems in medieval Gaelic Ireland reflected a more subtle tendency in Irish jurisprudence and practice to conceive of *Ecclesia* and *Tuath* as separate and alternate entities with each having its own rights, and relations between the two governed by contract. For example, a study of the development of the Church's manner of holding land suggests that it seems to have controlled some of its property as a sovereign entity—outside and apart from the authority of any king and the jurisdiction of any *tuath*. Some churches were very clearly held under lay proprietorship—the proprietor being a layman with the right of patronage. In other cases the land was given away without any restrictions at all—public or private—into absolute allodial ownership by an ecclesiatical corporation. In some cases familial land was donated with the consent of all the kindred but the abbot or cleric holding the benefice had to be chosen from the kindred of the donor. For example, ten of the first eleven Abbots of Iona were kinsmen of the founder, St. Columcille. Lastly, royal land—land which was attached to the public office of the kingship—was donated to the church with the consent of the assembly of the *Tuath* in return for the clergy performing spiritual offices without fee among the people. These lands were apparently freed of all public obligations- to billet troops, answer a call to arms or give tribute to the king.[15]

The Church continually pressed to free itself of all obligations to lay owners or public authorities. This effort accelerated during the 11th and early 12th century as part of the Gregorian reform movement and the investiture controversy. But as early as the 6th century, many monasteries were operating as virtual ecclesiastical *tuatha* ruled by their abbots. Daughter houses were established which recognized the abbot of the founding house as their "overlord" and the many houses and properties, tenants, clients and unfree dependents located over wide areas of the British isles and Ireland appear to be ecclesiastical principalities dealing with the secular *tuatha* as equals rather than subjects. By the early seventh century the Archbishopric of Armagh heads a federation of churches spread across the north and west of Ireland, while the bishoprics of Kildare, and probably Cork and Emly in the south, are following suit. Armagh claimed overlordship over any church that was free of obligations to an existing overlord—be he king, lay proprietor or abbot. By the 8th century the bishops of Armagh and Kildare, and the Abbots of Iona, Clonmacnois and Bangor were rulers over vast ecclesiastical principalities free of the rule of any secular authority.[16]

This situation continued in those parts of Ireland not subjected to English rule. For example, when the native Irish archbishop of Armagh, Nicholas mac Moel Iosa, received the notorious papal bull *Clericis laicos* asserting the most extreme papal claims to immunity from State control (issued by Boniface VIII in 1296), he called a meeting of the kings of all the *tuatha* within his jurisdiction, explained the implications of the papal bull, and asked for their oaths of affirmation. Apparently without any great conflict, they agreed to respect the immunity of the clergy, their property, tenants and artisans from any lay impositions — fiscal, alimentary or servile, and undertook to respect the right of the clergy to have all cases involving their delicts, debts or contracts heard in the bishop's court rather than the brehon's. They further undertook the obligation of acting as sureties to the church for the apprehension of anyone in their jurisdiction who failed to appear before the episcopal courts.[17]

While the Archbishop had no difficulty in getting the Irish kings to recognize the immunities of the Church, he ran into grave difficulties with the English king Edward I whose rule extended over parts of the province of Armagh. He was accused by Edward's officials in Ireland of wholesale usurpation of the King's rights over the Irish Church. He had appropriated to himself the custody of the temporalities—properties—of vacant bishoprics and abbacies; he had consecrated new prelates for these offices without the king's license; he had heard pleas in his court that by right belonged to the King's court, to the detriment of the royal prerogatives and revenues. Archbishop Nicholas defended himself by arguing that he had acted in accordance with the ancient rights (under Irish law) of his Church as in the days before the conquest, rights which the English king Henry II had sworn to uphold. Edward replied to that argument by imposing a heavy fine and ordering that his officials make sure no Irishman ever was elected again as Archbishop of Armagh.[18]

This is but one clear instance in which the property rights and the freedom the Irish church achieved under Irish law were to be radically reduced under the impact of English feudal and common law traditions. By the 14th century, the antagonism of the two peoples was so great that the English government forbade any religious order, monastery, collegiate church or cathedral to admit to its membership anyone of Irish nationality. Moreover, anyone who was Irish presenting himself for ordination to clerical orders in a diocese under the English king's jurisidiction was presumed to "have lived continuously among evil people and to come from an evil background", and was to be denied sacred orders. Thus were the native Irish dispossessed of their own churches in their own land to give places to foreign invaders.[19]

II

Let us now examine in some detail the character of Irish law and the role of property in Irish legal and social institutions.

Irish society was a precisely stratified, class-conscious society in which one's social rank had legal and economic foundations. The earliest law tracts divide the population into two legal classes: the free and the unfree. The free are the kings, nobles and commoners—all those who own land and thus enjoy the franchise, a place in the assembly of the *tuath*, and have a legal capacity to make contracts in their own right or through their father, husband or male kinsmen. Possibly under the influence of the Church, which had seven orders of clergy, the jurists subdivided the kings into three grades, the nobles and commoners into seven each. The grade or rank of a man was determined by the amount of property he owned and the number of clients he had. Since the clients varied according to his available wealth (see below), wealth was the principal basis for a man's rank in Irish society. The unfree were those who did not own land, thus did not have the franchise, and were usually household retainers or tenants at will of a landowner.

What is somewhat surprising is the fact that these ranks and categories were not fixed. The law texts say that "the free may sit in the seat of the unfree" and "the unfree may sit in the seat of the free". "Everyone may become free by his wealth and unfree by his lips". The free who become unfree are those who sell all their land or rights or body in service to another (slavery). The unfree in the seat of the free are those who buy land or the right to the franchise by their art (skilled craftsmen), their talent (bards), or by husbandry (tenants at will). This social mobility is reflected in the legal maxim: A man is better than his birth. The only class excluded permanently from recovering their free status were those who had forfeited their lives for some crime, but were ransomed and kept as servile tenants by some free man. But generally, wealth, talent or skilled craftsmanship were enough to make free status possible. In effect, economic self-sufficiency was the hall-mark of free status.[20]

While some historians have been dubious as to the reality of the fine distinctions in grade or rank which the law tracts reveal when applied to the actualities of everyday life, I do not share their view. Admittedly medieval intellectuals in general, and the Irish jurists in particular, show a marked predilection for making numerically ordered distinctions in all sorts of situations. But it must be remembered here that the assessment of a man's property—its character and value (land, chattels, clients)—was absolutely necessary if he was to participate in the very elaborate system of suretyship which was the basic mechanism by which all law was enforced. And it also was vital to assess his honor-price—another essential part of the Irish system of justice.[21]

The honor-price (*dire* or *enclann*) was the payment due to any free man if his honor or rights were injured or impugned in any fashion by another person. It might be invoked for the violation of any contract, any act of violence to his person or that of his dependents, any trespass on his rights or property, or even a malicious use of "satire" without cause which damaged his reputation (usually the work of a bard or poet). In the oldest texts, honor-price varied in amount according to the rank of the victim, and the penalty for the offense varied, being fixed according to the seriousness of the offense at the amount of his honor-price or some multiple or fraction thereof. At a later stage of legal development, the jurists established fixed penalties for specific crimes and enforced them equally regardless of the rank of the victim. But in addition, the offender still had to pay the honor-price appropriate to the victim's rank.

Honor price was also essential in the workings of the surety system by which means all judgments of the brehons' courts were enforced. Since law enforcement was not a function of the state or king in the Irish *tuath*, it was entirely dependent upon each party in an action or suit providing himself with sureties who would guarantee that the judgment of the brehon's court would be honored. If a person was about to bring suit, he sought sureties to help him in persuading the defendant to submit to peaceful adjudication of the dispute; this might involve applying the law of distraint in which the plaintiff seized some movable property of the defendant and impounded it under lawful procedures until the defendant gave surety that he would submit to adjudication. If he refused to do so, the community would consider him an outlaw—and he and his property would lose the protection of the law.[22]

There were three kinds of surety: first, a surety might offer the plaintiff to join him in enforcing his claim against the defendant. Since Irish law did not distinguish between tort and criminal actions, all crimes or suits were punished by payment of fines and honor-prices. Thus the plaintiff—if he won his suit—became a creditor, the defendant became a debtor. The surety guaranteed payment by pledging his own honor-price. A second form of surety (*aitire*) had the surety pledge his person and freedom as a guarantee. If the party defaulted on his obligations, the surety had to surrender himself to the aggrieved party and then begin to negotiate his freedom by paying the debt and also the honor-price of the creditor for this new injury. Once freed he could of course try to recover his losses from the defaulter.[23] A third type of surety (*rath*) guaranteed that in the event the debtor defaulted the creditor would be paid out of the surety's own property. If the surety was subjected to loss, the debtor must pay his honor-price. If he defaulted, his honor-price was forfeited and he lost his legal status.

Because of the vital role that it played in the surety system, honor-price was one of the chief attributes of a person's rank and only men of full legal capacity possessed it in their own right. Wives, children and sons living in their father's house were protected by the honor-price of their husbands, fathers or male guardians. Sureties and compurgators—persons who gave oaths as to the truthfulness of contestants in a legal dispute—had to have their honor-price assessed because they were forbidden to pledge payment of any debt beyond the value of their honor-price which was, of course, assessed on the basis of their rank which was in its turn based upon an assessment of their wealth. Thus ownership of property in all its forms was the basis of a man's legal status and marked the extent of his participation in and protection within the legal system.[23]

The Irish law recognized three distinct kinds of contract: *sochor, dochor* and *michor*. A *sochor* was a "good contract" which had three qualities: it was a contract between two or more free men; these free men were legally capable to act (not insane or minors or otherwise restricted in legal capacity); and lastly, the objects exchanged were of "equal profitableness". In contrast is the *dochor* or "bad contract" in which the first two qualities are present, but the third is lacking. Here the seller has suffered some loss of value in the exchange. What appears to be present here is the intrusion of the Christian concept of the "just price", perhaps an early influence of the Church upon the law. But what is most significant is that, while failure to exchange at a just price renders a contract "bad", it does *not* render it invalid. An invalid contract—called *michor*—is one which is illicit or void because one or more of the parties had not the legal capacity to act in his own right or was not a free man. The moral dubiousness of the *dochor* is not the issue and has no direct legal impact. However, as we shall see, the legal distinction did have legal impact in cases where women executed contracts in the absence of their husbands, or men without the consent of their wives in some instances.[24]

As in so many ancient societies, in Ireland many economic transactions took place under the guise of a contractual relationship known as clientship. In Irish law, clientship was of two distinct types—free and base, distinguished from one another by the type of services required by each. Free clientship (*soer-celsine*) was the grant by a king or noble to another free man of livestock in return for the payment of a "rent" of ⅓ of the value of the livestock to be paid annually for 7 years. At the end of that time, the client became sole and absolute owner of the livestock and his clientship terminated. All classes of free men were eligible to become free clients without any loss of legal status, franchise or honor-price. The only other obligations were that the free client did homage to his "lord" or creditor by standing in his presence and by attending him on certain ceremonial occasions. Since a noble's or a king's rank depended in part on the number of clients that he had attending him, the Irish upper classes invested a large part of their assets in acquiring as many clients as they could afford. This gave them increased social and legal status, and probably increased their political power in the assemblies as well. It also raised the value of their honor-price, thereby increasing their capacity to act as sureties and compurgators.

The base client was also a free man, an owner of some land, but usually a commoner. He received a grant of either stock or land from a person of higher rank in return for the payment of an annual rent in kind (a food-rent) proportionate in value to the value of the borrowed land or stock. In addition he owed specified labor services to his "lord" or creditor, and this is why his clientship was "base".

The Irish apparently considered that laboring for another man somehow impugned one's honor because the "lord" had to pay the base client upon the initiation of the contract the value of his honor-price. In return the "lord" was entitled to receive a percentage of the base client's honor-price and other compensation paid to him if he sustained any injury or violence resulting in a legal settlement. The base client thus remained a free man and could terminate his base clientship at any time upon returning the "lord's" property and compensating him for any possible losses.[25]

The Anglo-Norman invasion of Ireland in the late 12th century and the subsequent partial conquest of its territory was to have a detrimental effect upon the status and legal rights of the Irish clients, particularly on those who were base. Neither form of Irish clientship was equivalent to Anglo-Norman vassalage. Free clientship was essentially a form of commercial contract in which the purchaser bought livestock on a deferred time payment system. He remained free in legal status and the contract was terminable at the end of seven years or even earlier if paid in full. No one could mistake this for a feudal bond of vassalage or a fief despite the free client's minimal social obligations to his creditor. But base clientship, where manual labor services were required along with an annual food-rent, was more easily misunderstood by the Anglo-Normans as equivalent to English villeinage or serfdom.[26]

In Irish law among the ranks of the unfree were a specific class-the *sen-chleithe*-who are the legal equivalent of the English villeins. They are hereditary holders of a parcel of land in return for uncertain service and pass as appurtenances of the land should it be alienated or sold. They are included as part of the owner's property for purposes of assessing his honor-price and rank. Another class of the unfree are the *fuidir* who are not "villeins' in Irish law but are tenants at will bound to uncertain services. However, they are free to move or abandon their holding upon due notice to their landlord, and may rise in social status or fall to the rank of *sen-chleithe* if they have had ancestors living on the same land for nine generations—an unlikely situation.[27]

With the English occupation both the *fuidir* and the base clients were reduced to serfdom under English law. They are called *betaghs* or *betagius* in the English documents from the 12th century onwards. The *fuidir* lost the right to leave his holding and the possibility of rising in status. The base client lost his personal status as a free man, his right to the ownership of his own land and moveable property, and the right to bequeath his property to the Church or others. Even the free clients seem to have suffered some loss in status as the distinction between them and the base clients was often ignored by the English in their efforts to seize the properties of the conquered Irish. Thus the English conquest meant a vast displacement and dispossession, and loss of status for most of the Irish landholding classes and tenantry as well.[28]

As we have already indicated, one of the most persistent myths of Irish history is the belief that a form of primitive communism prevailed in landholding. Due in part to the failure of the translators and editors of the law tracts published in the 19th century to use such words as "tribe", "clan" and "sept" precisely, later writers, particularly those dependent upon Patrick Joyce's work as a source, confused the lands of the *tuath* with those of the *fine* or family. In addition, Irish law recognized joint-ownership and co-tenancy as well as co-operative work ventures. All of these have been vaguely described in different places as "communal ownership" or communism.

In a very detailed critique of Joyce's work, Eoin MacNeill, one of the first professional historians who was also able to read and interpret the law tracts from their manuscripts with competency in Old Irish, pointed out that there was no evidence whatever to suggest that the lands of the *tuath* were held in common or periodically redistributed. Quoting Sir Henry Maine who had admitted that "all the Brehon writers seem to have had a bias towards private as distinguished from collective ownership", MacNeill wryly comments that it was hardly a bias-it was a reality. It was a myth of collective ownership that was the product of bias. There are only two kinds of land which seem to have been viewed as being without owners: mountain peaks and woodlands or forests which were not partitioned or appropriated. There was also the land that belonged to the king by reason of his office. But since the kingship was normally hereditary within a kindred or *derbfine*—four generations of males of which one had been a reigning king—even the royal domains had a semi-private character as they circulated in usufruct within the royal dynasty.[29]

The English government encouraged Irish rulers to surrender their *tuath* and its landed territory to the English Crown which would then re-grant it in feudal tenure to the Irish king who thenceforth would be a feudal vassal. The result of such a transaction in effect would be to transfer ownership of all lands from the allodial Irish owners to the English king and then as a fief to the new Irish vassal—dispossessing the people to the benefit of the Crown and the Irish former king. Needless to say, such Irish kings were swiftly repudiated by their people.[30]

Ownership of property in Ireland was generally absolute; but some instances of limitations were recognized in the law tracts. For example, there were three instances in which the rights of ownership were subject to adversative prescription. If two successive generations of landowners failed to challenge the right of a millrace to cross their land without receiving some form of compensation for the infringement, the millrace became the absolute property of the mill owner(s). The same rule applied to the construction of a fishing weir across a stream or estuary and the right of way of a bridge or plank roadway across a stream or bog. Also, the law recognized that certain personal "necessities" suspended private property rights in particular instances: a man might take a single salmon from a stream or a single drawing of a net from a river or lake without infringing on the property rights of the owners; he could also cut a sapling for a riding crop or the shaft of a spear or commandeer a wagon to carry home a corpse. The gathering of nuts or kindling from woodlands was free to all equally, provided the woodlands were not partitioned or appropriated for private use. Seaweed could be taken also under the same restrictions. As for wild beasts, they belonged to whoever killed them.[31]

A very common form of property holding was joint-tenancy. This was especially common where the kindred were acting as a close economic unit in livestock raising or tilling the soil. In a pastoral enterprise where summer and winter pasture were needed and large herds of cattle, sheep or kine required only a few persons to attend them in the fields, co-tenancy was a reasonable solution involving both division of labor and maximum utilization of land. The Irish took a dim view of trespassing and neighbors were required to give each other sureties against trespass; in co-tenancy of land, the repair and maintenance of fencing was the responsibility of each co-tenant along the outer boundary of his own land; failure to keep it properly fenced compelled him to pay a fine to his co-tenants, and he probably forfeited his surety to his neighbor for trespass as well. Each tenant was required to supply some tool which was stored in a common place; each morning he was required to appear at a fixed time when the day's work on the fencing would begin. If late, another might take his tool for the day and he paid a fine. The co-tenants also took turns in guarding their livestock. To protect themselves against suit for negligence, the co-herders set limits to their personal liability before witnesses and gave sureties to each other. The losses due to attacks by wolves, gorings, and wanderings into bogs were provided against by these contracts and individual responsibility for loss thus established.[32]

A form of joint-ownership was used in the construction of mills. The owners were usually monasteries, kindred groups or individual joint-owners. If a mill was wholly within the lands of a single landowner that would obviate the need for joint-ownership. But frequently the water for the millrace and pond had to be diverted from a distant lake or stream. This meant that the owners of the source of the water, and the landowners through whose land the millrace ran, had to be compensated for the infringement of their property rights. This might be done by payment of a single sum to the owners of the land or water resource, or else recognizing them as joint-owners with specific rights of use of the mill for set periods in varying proportions. The owner of the mill and pond and the owner of the source of the waters got the largest share, with the landowners of the land through which the millrace passed getting proportionately less. (It was noted elsewhere that the landowners had to allow the millrace and could lose their rights to compensation after two generations).[33]

The climate of Ireland is such that drainage is a major problem. Thus ditches abound for drawing off water, and for keeping cattle impounded. The occurrence of drownings was apparently so common that the jurists waived the liability of owners for drownings in ditches, or other accidental deaths in ditches surrounding cattle pens, homesteads, churches, or grave mounds, or in millraces and ponds, peat bogs or from footbridges. But if an accident was due to the failure to fence one's fields, the owner was liable to be fined.[34]

One of the more difficult problems in studying the Irish law of land ownership is the property of a family or kindred group. MacNeill admits that here we may have "communal" ownership. By this he means that certain land cannot be sold without the consent of the *derbfine*—all males descended from a common great-grandfather to the third generation. Thus this group is also the normal range of inheritors and also entitled to the compensation for homicide for any of its members. While each member held and disposed of the fruits of his own parcel of land, some residual control was exercised by the kinsmen. When the land was redistributed is not clear, but some division must have taken place when a young man came of age, perhaps his share of his father's patrimony was transferred at this time. If he died without sons, it probably was redivided among his brothers. Sons were the normal and equal heirs of their fathers, and their mothers.[35]

Whether land was distributed in proportional share upon the death of any kinsman amongst all the kinsmen seems dubious. The fractionalization would seem very much against the interest of orderly management. Some writers imply this was the case, but may have been misled by a law tract dealing with the division of compensation due a dead man levied on his murderer by an armed raid into another *tuath*. In this tract, the deceased's compensation is obviously movable—it had been captured and taken from another territory. Also, it was divided first into three thirds—one went to the king and nobles of every grade above the deceased's; a second third to the members of the hosting other than the above; and the last third to the deceased's kindred. This last third was then divided by a series of apportionments by fractions among the kinsmen according to the closeness of their relationship to the dead man. This legal rule for a specific type of bloodletting, should not be assumed to be the norm for the division of ordinary property. Thus the actual distribution of landed property may well have been confined normally to the immediate male issue, while the more distant kinsmen retained residual rights of inheritance in case of failure of direct issue.[36]

One result of the English conquest was the displacement of the Irish law of inheritance. Under the feudal customs of England the law of primogeniture prevailed and was also applied to Ireland. Certain 16th century legal agreements have Irishmen trying to preserve the old system of equal sharing among sons, but these were not recognized in English courts, thus disinheriting the normal Irish heirs.[37]

One last look at Irish concepts of property right may be revealing. A 17th century manuscript reveals a poetic dialogue between two contestants before a brehon. The first, representing the "men of Munster", claims they own the Shannon River and its resources on three grounds; the Shannon was conquered in the 11th century by the Munster king Brian Boru from the Vikings; that the river in its lower courses runs through their lands; and that in a previous case Brian's rights were upheld. The poet representing the "men of Connacht" bases his claim on the fact that the river was always recognized as theirs from the time of Patrick to that of Brian; that the passage of a river through the land of Munster does not make it the property of Munster, any more than a man travelling through Munster becomes thereby a Munsterman; that the judgement in favor of Brian was invalid because made by a foreigner (thus unfamiliar with Irish law); and lastly that the river belonged to Connacht because it had its source in that land.

The brehon decided in favor of the poet of Connacht. He held that "just as the offspring of every father belongs to the father and inherits his patrimony, the natural father of every stream is every unexhausted well from which it springs forth first". As the Shannon has its source in Connacht, it and its resources belong to the men of Connacht. The previous judgment on behalf of Brian is interesting also, and not repudiated explicitly. Brian as presumptive owner of the river claimed ownership of a jewel found in the gullet of a fish taken from the river by a trespassing fisherman. He won his claim since the fish in a lake or river belonged to its owner.

Rivers and streams and waters in Ireland are still held in private ownership-but by descendants of the English feudalists.[38]

III

A fair test of the sophistication of any legal system might be to examine the extent to which women enjoy legal capacity and property rights. By this standard Irish law in the 8th century may have had more sophistication than English law in the days of Queen Victoria.

Irish law was typically Indo-European in that it was patriarchal in character at the dawn of the historical period. In all the oldest legal texts women have no legal capacity to act or own property in their own right. They are under the tutelage of some male—father, brother, husband or son—just as if they were children.

Yet even under this burden, women were in practice straining to break the bonds of the law. The early law tracts found it necessary to mention that a husband has the right to rescind any contract made by his wife in his absence, even if she had found sureties to support it. The contract was deemed invalid, and the sureties as well. But the clear implication is that women were in fact making contracts in their husband's name in his absence, and the jurist who composed the tract must have been under some pressure to acknowledge the practice, for he specified that such an invalid contract could be validated if the husband neglected to repudiate it within 15 days of his return home or of his being notified of its existence.[39]

The legal incapacity of women is also evident in the earliest forms of marriage contract in which the wife is under her husband's tutelage. But already a concession to her appears. If she is of rank equal to him, she may interpose to prevent him making a *dochor*, a "bad" or disadvantageous contract (see above). Her intervention does not invalidate the contract; it merely suspends its coming into force until her son or husband's kinsmen can be informed and given time to act. The implication is that her husband is about to alienate property that is not fully his to dispose of. Even if she is only betrothed, a woman can intervene in some instances to prevent her future husband from acting, at least temporarily.[40]

Another somewhat important breach which opened the way for extending women's legal capacity was recognition of her right to give a gift of a value no greater that her honor-price—normally half that of her husband. Gift-giving is not a contractual act, but it implies the capacity to own property in one's own right. Specifically she had the right to give the "product of her own hands" to the Church.

The greatest departure from the system of male tutelage over women is found in the law tract called the *Senchas Mor* composed in the early 8th century and reflecting the teachings of a school of law operating in Northern Ireland. There, as in so many other cases, one of the pressure points for granting women wider legal capacity was the natural desire of sonless fathers to wish to bequeath their property to their daughters. In the *SM* daughters are recognized as having the right to a life interest in the landed property of their father if he left no sons, or presumably grandsons of the male line. But at the daughter's death, the land, which appears to have been familial, reverted to the natural male heirs of the father's *fine* or kindred. As an heiress to such property, the daughter logically had to have the means to protect it; therefore she was recognized as having a variety of legal rights including the right to sue and be sued, to engage in distraint and even to make legal entry on disputed or unoccupied land by almost the same procedure as was open to males in the same circumstances. Recognition of life interest in familial land in certain circumstances also implied that she had full ownership of the product of that land, and the right to dispose of it freely. The older form of marriage contract in which the woman was under her husband's tutelage did not lend itself to such a situation, and it now gave way to a new form of marital contract which soon became the norm among the propertied classes. Called a marriage of "mutual portions", it required that each partner to a marriage bring to it a set portion of property which was to be held jointly by husband and wife, its profits being divided proportionately between them. In this joint ownership-partnership, no contract was valid without the consent of each partner, except when the contract "advanced their common well-being". If either party made a *dochor* or disadvantageous contract, it could be rescinded within 15 days of the other partner returning home or receiving notification of its having been made. Specific types of contracts mentioned in the texts include the hire of land, the purchase of livestock, the purchase of necessary household equipment or supplies, and agreement between kinsmen for joint tillage of fields. No object whose lack was disadvantageous to the joint household could be sold without mutual consent.[42]

In addition to the property which the marriage partners held jointly, each could own additional property, including the profits of their joint holding, in absolute single or sole ownership. The only restriction on the profits of their joint enterprise was that the wife could dispose of her share only to the value of her honor-price which was half that of her husband. This may have had some further restriction as to time limit but the texts are silent on it. The husband's share of the profits of their joint household was his sole property, but in certain instances his wife could dispose of it without his consent. She could alienate it to his advantage, but was subject to a fine if she acted without his consent. If he incurred any loss in the transaction, and she somehow made a gain, she could be sued by her husband for theft. This rule seems to envision embezzlement or fraud among partners.[43]

A woman could inherit property from her mother if there were no sons, but normally the sons were the natural heirs to their mother's as well as their father's property. If childless, a woman's property reverted to her nearest male kinsmen—not her husband—or she could bequeath it to the Church.

One of the most startling aspects of the Irish law was its treatment of the rights of women in various sexual relationships outside Christian marriage and their right to divorce. In one legal tract no less than ten different kinds of sexual union between males and females are legally recognized—each having a very precise legal character, each partner enjoying specific property rights and obligations. From a Christian viewpoint, some of these relationships are clearly polygamous, others irregular, some even casual or violent. Most legal systems in Christian Europe denied these women legal status and rights, and extended these deprivations to the children unless the father recognized them. The Irish law recognized rights of maintenance and support which vary in degree and amount according to the character of the sexual union. For example, in a marriage of mutual portions the cost of "fostering" or rearing a child is shared equally by the parents; but if the child is born of a bondwoman, or as a result of rape, or in secret, the father is responsible solely for its rearing costs. In some instances the male has some control over the woman's property rights and a right to share in her honor-price; in others she controls some of his property rights and shares in his honor price. The detail, extensiveness, balance and proportionality with which the rights and obligations of each partner are assigned in these very unchristian couplings is unique in the law tracts of Christian Europe.[44]

Although it has been suggested that this is another instance of the archaic and unreal character of the Irish law tracts, which could not have had validity in a Christianized Ireland, the evidence suggests otherwise. Throughout the medieval period, both Irish clerical and foreign commentators frequently denounce the Irish for their failure to suppress sexual promiscuity and adhere to the marriage laws of the Church and "civilized" societies. It is most unlikely that the Irish were more promiscuous than other peoples; but it was their unique practice of continuing to separate canon law from civil law that seemed so scandalous to other Europeans.[45]

Similarly, the Irish law recognized the right of divorce. A man might repudiate his wife for dishonoring him, doing him some injury or willful abortion. But, incredibly, the wife could initiate a divorce action against her husband! She could charge consanguinity, incurable infirmity, sterility, cruelty evidenced by lasting injury, slanderous remarks as to her character, abandonment for another woman, willful neglect in supplying the necessities of life, or abandonment by reason of his entering a monastery. None of the above except consanguinity was grounds for annulment in canon law. There were also some eleven categories of legal separation with respective property rights and obligations regarding the care of children and distribution of property. That these laws were not "obsolete" can be shown in the marital history of Gormflath. Wife first of Olaf, Viking king of Dublin, widowed, she married Malachy, king of Meath and High-King of Tara A.D. 980. Malachy repudiated her, and she later married and divorced Brian Boru, who also won the High-Kingship by replacing Malachy. Thus she had two ex-husbands still living when she became betrothed to a third, Sigurd, Earl of Orkney.[46]

While the history of Irish law between the 8th and 17th centuries is very sketchy due to the lack of surviving historical materials, occasional references indicate that women continued to enjoy an exceptional standing in law with regard to their property rights down to the end of native Irish culture and independence in the early 17th century. In the early 14th century there is reference to a woman acting as an agent for an English proprietor whose cattle have been "stolen" by some Irishmen. She is commissioned to mediate for their return—the Irish having in their law invoked the law of distraint on the Englishmen's cattle. There is even a reference to a woman sitting as an arbitrator along with a brehon in a suit. In the early 17th century the English observer Sir John Davies in his book investigating why the Irish were so hard to conquer remarks: that the Irish are so savage that "the wives of Irish lords and chieftains claim to have sole property in a certain portion of the goods during coverture with the power to dispose of such goods without the assent of their husbands; (therefore) it was resolved and declared by all the (English) judges that the property of such goods should be adjudged to be in the husbands and not in the wives as the (English) common law is in such cases". This is but another example of the destructive and retrogressive effect of the imposition of English common law on the legal status and property rights of the Irish people.[47]

CONCLUSION AND SUMMARY

While a comprehensive survey of the Irish law of property and property rights cannot yet be written, we can already see that the idea of private ownership permeates those aspects of the law which have been subjected to recent study. The Irish frankly and openly used assessments of property as the criterion for determining a man's social and legal status, the extent of his capacity to act as a surety or compurgator, and to fix the amounts of compensation due him as a victim of crime or any kind of injury. Ownership of land determined a man's status as free or unfree and his right to participate in the public assembly. The needs of the Church modified but did not alter the basic character of native Irish institutions and law. While it secured for itself almost total freedom from lay ownership and secular obligations, it was never able to fully destroy the essentially secular character of Irish law as exemplified in the laws on marriage and divorce. The legal capacity of women showed exceptional development and gave women property rights in the 8th century that were centuries ahead of those enjoyed by English women. The fact that Irish law was the creation of private individuals who were professional, even hereditary, jurists, gave to the law both a conservative yet flexible and equitable character. Their power rested upon the free consent of the community in choosing them as arbitrators in disputes; and this made equity and justice more likely than in royal courts where the interests of the State and its rulers are paramount. The invasion and conquest of Ireland, the work of over 400 years before it was completed, was eventually fatal to the Irish system of law and the culture and civilization it expressed. The English State was incompatible with the Irish *tuath*; the English common law was totally incompatible with the Irish law. Ireland from the 12th century was a single land in which two nations and two laws and two cultures engaged in a constant struggle for survival. The end came in the early 17th century with the flight of the last Irish kings from Ulster and the new plantation of that region by Protestant Scots sent by James I—that most absolute of English Kings.

As for the native Irish and their ancient culture, the English official Sir John Davies thought he said it all:

> "For if we consider the Nature of the Irish Customes, we shall finde that the people that doeth use them, must of necessitie bee Rebelles to all good Government, destroy the commonwealth wherein they live and bring Barbarisme and desolation upon the richest and most fruitfull Land of the world".[48]

NOTES

1. *The Ancient Laws of Ireland,* 6 volumes. 1865 - 1901. The most complete evaluation of the law tracts by a competent Irish philologist and jurist is D. A. Binchy's Rhys Memorial Lecture before the British Academy entitled *The Linguistic and Historical Value of the Irish Law Tracts* (London, 1943). Also Binchy, "Ancient Irish Law", *Irish Jurist* NS 1(1966), 84 - 92.
2. Patrick W. Joyce, *A Social History of Ancient Ireland* (Dublin, 1906). 2 vols. Reprinted in 1913 and 1968.
3. P. Boissonade, *Life and Work in Medieval Europe,* trans. by Eileen Power (London, 1927). Harper Torch book edition (New York, 1964). See pp. 78–79 of the latter.
4. See the review of Daniel Coghlan's *Ancient Land Tenures of Ireland* in *Irish Law Times and Solicitors' Journal* (March 10, 1934). Further comments in July 14 and Sept. 15 issues. The reviewer is anonymous.
5. P. Beresford Ellis, *A History of the Irish Working Class* (London, 1972). The author ignores all modern scholarship on the subject and rejects MacNeill's criticism of Joyce because he was pro-capitalist!
6. Binchy, *Historical Value of Irish Law Tracts,* 22. Also, Gearoid Mac Niocaill, "Notes on Litigation in late Irish law", *Irish Jurist* NS 2 (1967), 299 - 307, and G. J. Hand, "The Forgotten Statutes of Kilkenny", *Irish Jurist* NS 1 (1966), 301.
7. D. A. Binchy in *Early Irish Society* (Dublin, 1954). 56-58. Also, Myles Dillon and Nora Chadwick, *The Celtic Realms* (London, 1967), 93 - 98.
8. Binchy, *Irish Jurist* NS 1 (1966), 84 - 92.
9. *Ibid.* See also, Eoin MacNeill, "Prolegomena to a Study of the Ancient Laws of Ireland" *Irish Jurist* NS 2 (1967), 106 - 115.
10. The most authoritative recent study of the Irish Church in the pre-conquest period is Kathleen Hughes, *The Church in Early Irish Society* (London, 1966). See chapters 4 and 5 in particular here.
11. *Ibid.* Chapter 12, pp. 123 - 133 and Chapter 5, pp. 45 - 55.
12. *Ibid.* Also, for St. Patrick, see R.P.C. Hanson, *St. Patrick: His Origins and Career* (New York, 1968), 139.
13. Ludwig Bieler, "The Irish Penitentials", *Scriptores Latini Hiberniae* (Dublin, 1963).
14. Hughes, Chapter 14, pp. 143 - 156. See especially 149 - 153.
15. See paper given to Columbia University Faculty Seminar

in History of Legal and Political Thought (1966) by Prof. Charles Donohue of Fordham University: *On the Senchas Mor, an early 8th century tract including material on Church-State Relations.* Also, Hughes, 161.

16. Hughes, Chapter 8, pp. 79-90 on monastic *paruchiae* and Chapter 11, pp. 111-122 on Armagh.
17. J. A. Watt, *The Church and the Two Nations in Medieval Ireland* (Cambridge, England, 1970), 160-169.
18. *Ibid.*
19. *Ibid,* 206 - 207 and 211.
20. Eoin Mac Neill, "The Law of Status or Franchise", *Proc. Royal Irish Academy* 36C (1921-24), 265 - 316. See here p. 273.
21. Binchy expressed some doubt on this in his *Historical Value,* p. 33.
22. See Dillon and Chadwick, *Celtic Realms* (London, 1967), 98 - 99. Also, see Mac Neill, *op. cit.*
23. *Ibid.*
24. Rudolf Thurneysen, *"Sochor* and *Dochor", Essays and Studies in Honor of Prof. Eoin Mac Neill,* edited by John Ryan S. J. (Dublin, 1940), 158 - 159.
25. For a discussion of clientship, see D. A. Binchy, *Crith Gablach* (Dublin, 1941), pp. 78, 80, 96 - 97 and 107. Also, Dillon and Chadwick, 95 - 96.
26. Gearoid Mac Niocaill, "The Origins of the Betagh", *Irish Jurist* NS 1 (1966), 292-298. Liam Price disagrees with Mac Nicoaill in *Eriu* 20 (1966), 185 - 190, but J. A. Hand is convinced by Mac Niocaill's analysis in his *English Law in Ireland 1290 - 1324* (Cambridge, 1967), 213.
27. Binchy, *Crith Gablach,* 105.
28. On *fuidir, Ibid.* 93. Otherwise, see *op. cit.*
29. Eoin Mac Neill, *Celtic Ireland* (Dublin, 1921), 144 - 151.
30. On the policy of "surrender and re-grant" under Henry VIII see J. C. Becket, *The Making of Modern Ireland* (London, 1966), 18 - 19.
31. D. A. Binchy, "Irish Law Tracts Re-edited: Coibnes Uisci Thairidne (AL IV, 206-222)", *Eriu* 17 (1955), see p. 81 n. 9 52ff. Also, Mac Neill, *Celtic Ireland,* 170 ff.
32. *Ancient Laws,* IV., p. 372 ff.
33. *Op. cit.*
34. *Ibid.,* 71-72
35. Mac Neill, *Celtic Ireland,* 152 - 176. Also, Mac Neill, "The Irish Law of Succession", *Studies* 8 (1919), 367 ff.
36. Mac Neill, *Studies* 8 (1919, 376 - 377. Also, Kuno Meyer, in *Eriu* 1 (1904), 214 - 215.
37. J. Otway-Ruthven, "The Native Irish and English Law in Medieval Ireland", *Irish Historical Studies* 8 (1950), 1 - 16.
38. Brian O'Cuiv, "The Poetic Confrontation about the Shannon River." *Eriu* 19 (1962), 89 - 105. The poem is dated to the 15th century.
39. D. A. Binchy, ed. *Studies in Early Irish Law* (Dublin, 1936). This is the most complete study of the status of women in Irish law and the product of a seminar conducted by Rudolph Thurneysen, the distinguished Celticist. See here D. A. Binchy, "The Legal Capacity of Women in Regard to Contracts", *SEIL,* pp. 207 - 234, especially 211 - 216.
40. Binchy, *SEIL,* 216 - 217 and 224 - 225.
41. *Ibid.,* 226-227 and on 209 note 1. Women could act as sureties under certain limitations, see pp. 232 - 234. On gifts see Myles Dillon, "The Relationship of Mother and Son, Father and Daughter and the Law of Inheritance", *SEIL,* 129 - 179 *passim.*
42. Binchy, *SEIL,* 226-228.
43. *Ibid.* 227 - 230. Some texts indicate daughters may inherit some kinds of chattels from their fathers, Dillon, *SEIL,* 171, n3.
44. Nancy Power, "Classes of Women Described in the Senchas Mor", *Studies in Early Irish Law (SEIL),* 81 - 108.
45. For a discussion of Irish marriage law and 12th century criticisms of it, A. Gwynn, "The First Synod of Cashel", *Irish Ecclesiastical Review* 66 (1945), 81 - 92; 67 (1946), 109 - 122.
46. August Knoch, "Die Eheschudung in alter Irischen Recht", *Studies in Early Irish Law,* 235 - 268. For Gormflath, see Edmund Curtis, *A History of Ireland* (Dublin, 1950), 28-30.
47. A quotation from Sir John Davies on "The Irish Custome de Gravelkind" in a review of *Studies in Irish Law* edited by D. A. Binchy in *The Irish Law Times,* 15 August, 1936.
48. Sir John Davies, *A dicovery of the true causes why Ireland was never entirely subdued* (London, 1612), 165.

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COMMENTS ABOUT THE MATHEMATICAL TREATMENT OF ECONOMIC PROBLEMS

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INTRODUCTION

It is not possible to examine thoroughly the question of the mathematical treatment of economic problems within the frame of a brief essay. Fundamental questions of philosophy and epistemology, impossible to dispose of in a few sentences, would have to be raised. Therefore, only a few points will be presented here and aphoristically discussed. For the rest, we must refer the reader to the books of Cairnes, Boehm-Bawerk, Cuhel, Rickert, and Max Weber and the author's own writings.[1]

THE PROBLEM OF MANAGEMENT

The slogan of the Econometric Society is the positivist statement: "Science is measurement." The society wishes to set up an exact mathematical science of economics to replace the supposedly inexact, expository, or logical economics which the positivists deride as "literary." What are they measuring?

In the seventh volume of the Econometrica, the periodical of the society, Senator (formerly professor) Paul H. Douglas says of the book by the late Henry Schultz, *The Theory and Measurement of Demand*, that it is "a work as necessary to help make economics a more or less exact science as was the determination of atomic weights for the development of chemistry."[2] Turning to Schultz's work, we find that his investigations do not deal with any commodity in general, but with the prices and supply of definite commodities within a certain area and during a definite period of the past. For example, he does not speak of potatoes in general, but about potatoes in the United States from 1875 to 1929. His book is a contribution to Economic history, a statement with which those can also agree who view his book as altogether mistaken and useless.

There was once a doctrine in economic science which saw a fixed relationship between supply and price in one case. It was believed that the purchasing power of the monetary unit is inversely proportionate to the amount of money in circulation. Except for this notion, long since refuted and abandoned, no one has ever dared to declare that the relation between the supply and the price of any commodity is unchangeable. Everything that can be found out through statistical experience about the supply of commodities and their prices is a datum for economic history. Statistics is one of the methods which economic history can make use of.

Laymen often insist that one can prove anything with statistics. Actually, statistical experience in the field of human action can prove nothing in the sense in which the natural sciences colloquially speak of proof. Historical experience, which is always the experience of complex phenomena, cannot lead to a knowledge of theoretical laws. Historical experience must be interpreted and explained by the help of general laws gained independently of historical experience.

The subject matter of economics is not potatoes, shirts or razor blades, but human action, which is directed by value judgments. A judg-

*Translation of an article entitled "Bemerkungen über die mathematische Behandlung nationalökonomischer Probleme", published in Studium Generale VI No 2., 1953, Springer Verlag, Berlin-Goettingen-Heidelberg, Translated by Helena Ratzka.

ment of value does not measure, it grades. It does not say *A* equals *B*. It says: I prefer *A* to *B*. Only out of such choices does action come into being. When the judgment of value deems *A* equal to *B*, no action takes place. Production and exchange do not result from equality of value, but from value difference.

Therefore, in the field of human action, there is no unit of measurement and no measuring. Prices are not measured in money; they are expressed in money.

As soon as we introduce a concrete datum in our deliberation on human action, such as the price of a commodity expressed in terms of money, we leave the field of economics and enter that of economic history, even if it be the history of this very last moment. Everything that can be said in figures about future prices is speculative anticipation. We can speculate correctly or incorrectly, but we can never be certain in advance that we will speculate correctly.

Positivism allows for no difference between the natural sciences and the sciences dealing with human action. Just as chemistry has progressed from the qualitative stage to the quantitative, so economics is to pass from the qualitative analysis of its problems to a quantitative analysis. The positivist does not see that there are no constants in human action and that his postulate is therefore unrealizable.

ON CHOICES

A daily increasing number of books and essays of the mathematical school deals with choices which individuals and companies make in the conduct of their daily business. A closer view shows that they deal with the algebrazation and generalization of the lines of thought taught in schools of business under the name of business arithmetic and which has long been applied by businessmen who never attended such a school.

The authors of these writings declare that their inquiries are of great value in business practice both in a capitalist society and in a socialist state. They never raise the question why businessmen pay no attention to their inquiries.

The truth is that these scholarly treatises give the businessmen only one piece of advice: to buy when he expects prices to rise and sell when he expects them to drop. Everything else they offer is insignificant. It is a waste of time to publish voluminous books on the best size of an inventory. Such a decision depends on the entrepreneur's plans which are based on his judgment of future conditions. All decisions in business life as well as in the life of the individual and in government affairs are guided by an expectation of a definite development of future conditions. They prove themselves false speculations if matters develop differently. This also applies to the management policies of the head of a socialist society. He, too, if he could calculate, would not calculate otherwise than does the businessman seeking profit. The fact that he cannot calculate belongs to another set of problems.

Like Marx and all socialists, the mathematical economists fail to realize that human action has to do with future conditions over which nothing certain is known. If we ignore the uncertainty of the future, we can, of course, build wonderful mathematical houses of cards. There is a silent agreement between all mathematical economists not to reveal the many contradictions in the assumptions upon which they base their inquiries. The concept of human action referring to a future that is in no way uncertain is logically inconceivable. The life of people for whom the future contains nothing unknown would be so different from the life we know that no imagination is adequate to form a picture of it. Would this be life at all in our sense?

The report of the highest authority in matters of mathematical economics, the Cowles Commision, for the period of January 1, 1948, to June 30, 1949, attempted a lame defense of the mathematical method. The report cannot deny that actually no "behavior constants" exists. But it clings to the assertion that the mathematical method merely assumes that the data presented "remain reasonably constant through a period of years."[3] Whether this hypothesis is true, however, can only be ascertained afterwards, i.e. by historical experience. Thus all the assumptions of the mathematical economists collapse. Their method proves to be a method dealing with the data of economic history. The highly praised equations are, insofar as they apply to the future, merely equations in which all quantities are unknown.

THE EQUATIONS

In modern economics, the notion of the evenly rotating economy (static economy or economy in a state of equilibrium) has a significant role. According to this notion, always identical processes of production are directed in such a way that goods of higher order go through these processes in a regularly repeated identity of kind and quantity, until finally the finished products reach the consumers and are used up. In this system, the market's state of rest is continually disturbed in the same way, and is continually restored in the same way. All data, including the disturbing factors, remain unchanged and thus the prices of all goods and services also remain unchanged. In the world of real human action, in the life of a living human being, there can never be a state that corresponds to the mental construct of a static economy. However, in order to comprehend changes in the conditions and uneven movements of a real economy, we must contrast them with a state of affairs in which changes and their effects are absent. Although the full logical development of this construction leads to insoluble contradictions, we may and must resort to it unhesitatingly, as it is the only method of clarifying the problems of enterprise, entrepreneurial profit, and loss. We proceed from a hypothetical, unrealizable state of affairs in which changes in the price-conditioning factors are absent, and then assume that a change in one of these factors alone disturbs the state of affairs; and we examine the consequences of this one change up to the moment when a new state of rest and equilibrium emerges.

In the laboratory the natural scientist observes the consequences of a change in a single isolated element. In the sciences of human action such experimentation is not conceivable. Its place is taken by the method of imaginary constructions which, after all, is essentially an investigation of the effects which the change of a single factor brings about, other things being equal.

On the analogy with classical mechanics, the state of affairs in an evenly rotating economy has metaphorically been called a state of equilibrium. It is possible to describe this state in terms of a system of simultaneous differential equations. The formulation of such equations is the essence of what the mathematical economists are trying to do.

But the formulation of these equations in no way broadens our knowledge. What logical economics says in words, and what the mathematical economists must also say in words before they can set up equations, is presented in mathematical symbols. But these equations differ entirely in their practical applicability as well as in their cognitive reference from the equations of mechanics.

In the equations of mechanics we can introduce constants which have been determined with reasonable exactness through empirical experimentation. In this way we can ascertain unknown quantities from given data with an accuracy sufficient for technology. In the field of human action, however, there are no such constants. The equations of mathematical economics are therefore useless for all practical purposes.

But they are also valueless as knowledge. The equations of mechanics describe the movement up each point, the way their elements move, and their position at each moment. Economic equations describe only an imaginary condition that differs from the actual condition and that can never be realized. They say nothing about the actions of acting men, which, on the unrealizable assumption that no further change in the data occurs, would lead to such a state of equilibrium. Of course, one could show mathematically how a state of affairs that differs from the state of equilibrium would have to change in order to arrive at the state of equilibrium. But such a demonstration of a mathematical process is not a description of how an economy that is not in the state of equilibrium actually moves in the direction that ultimately, provided no further changes in the data appear, would lead to equilibrium. Such a demonstration says nothing about the actions that constitute this process. Catallactics must show how market prices develop out of the action of individuals. The mathematical school of economic thought exhausts itself in the effort to describe a hypothetical state of affairs in which there would be no human action.

THE VOGUE OF ANALOGIES

Carl Menger once said there is no better means of reducing a fallacious variety of thought to absurdity than to let it live itself out completely. The mathematical school of economics is already on this path. Considerable financial means are at its disposal. It controls large numbers of periodicals in many languages, organizes congresses and conferences and is taught in most universities as the only true method of economics. It also enjoys special favor with governments and UNESCO. But all the praise which the representatives of the school lavish upon one another will not suffice, in the long run, to conceal the fact that this activity leads into a blind alley. As soon as a critic writes a book raising the question of the results of the mathematical method, the illusions will disappear.

No representative of the mathematical school has thus far considered it worth his while to answer with arguments the devastating critique which the method has called for. They believe it sufficient to point to the example of the natural sciences. Whoever denies the positivistic dogma is branded as a metaphysician and a follower of the "idealistic philosophies of history, especially of the modern German variety."[4] To concern himself with such pre-scientific and unscientific stuff is naturally beneath the dignity of a positivist.

In the third quarteer of the 19th century the biological analogy was very popular with positivistic economists and sociologists. Serious men then wrote treatises about such questions as, what is the intercellular substance of the "social body." Nobody any longer denies that these studies of Spencer, Schaeffle and Lilienfeld were a meaningless toying with words. The fashion has changed. Today men prefer the mechanical analogy. But this fashion too will pass without leaving any trace.

NOTES

1. We can also name an outstanding mathematician in this connection, Paul Painlevé. See his preface to the French edition of William Stanley Jevons' work, *Theory of Political Economy*, Paris, 1909.
2. P. 105.
3. P. 7.
4. Compare Sigmar von Fersen, in the article "Philosophy of History" In Runes, *Dictionary of Philosophy*, (New York, 1942).

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ON MATHEMATICAL THINKING IN ECONOMICS

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The interest of scholars in the application of mathematics to the social sciences is particularly lively at the present time. This is especially true in economics, as well as in such allied disciplines as econometrics and economic statistics. And yet, critical works by economists on methodological problems remain rare, as witness the fact that Professor Milton Friedman, in his *Essays in Positive Economics* (1953), based many of his ideas on John Neville Keynes' volume of 1891.[1]

The application of mathematics to the human sciences, and particularly to economics, rests on the implicit assumption that mathematics is an appropriate tool for all the sciences. The widespread adoption of this assumption stemmed from the brilliant successes achieved by the use of mathematics in physics, consisting mainly of accurate predictions of events taking place under controlled conditions. It is often overlooked, however (particularly by non-physicists), that these successes scarcely imply that every type of prediction of events can be attained by mathematics. In fact, events can only be predicted when the physicist can reduce and simplify them so as to correspond with a mathematical formula, capable of a calculable numerical solution.

Suppose, for example, that one tries to predict the movement of water contained in a glass when subjected to oscillations of any given magnitude. To answer this problem, we would first need to demonstrate that the system of differential equations involved in the problem has one and only one solution. Otherwise we could not discover a numerical solution. Such a solution, in our example, would only be possible if (a) the oscillations to which the glass is subjected are so slight as to allow the system of differential equations describing the movement of water to be *linear, and* if (b) the shape of the glass allows actual numerical calculation of the solution.

Devising a system of mathematical relations governing a phenomenon has no scientific or predictive use until a numerical solution can be obtained, i.e., until the theorems of existence and the methods of approximate numerical calculation have been established. Such a solution may only be considered satisfactory when it predicts successfully in experimental tests. Only in that case may the system of mathematical relations from which the solution derives be considered efficient.

Such is the essential role of mathematics in the science of physics. The example of physics therefore suggests that, in order to apply mathematics to a science, certain preconditions must be fulfilled, conditions which may or may not be the same as the prerequisites for applying mathematics to physics.

It would be quite meaningless to rest content with vague categorical statements that mathematics may, or may not, be properly applied to economics. We must inquire in greater de-

*In slightly altered form, this paper was delivered at the Center of Methodological Studies at Torino, and published in Italian, in *Il Politico* (Anno XX, no. 2, 1955). It was later delivered at the School of Economics at the University of Manchester.

tail into the titles of legitimacy, into the advantages and disadvantages, of such mathematical instruments as numerical utility theory or analysis of indifference curves, of cost curves or of various maximum and minimum constructions. To answer these questions, it is necessary to examine the often inarticulated goals that mathematical economists have in view. If we examine the works of mathematical economists, and consider that these applications to economics have been suggested by purported analogies to physics (as is revealed by such generally adopted terminology as "statics", "dynamics", "equilibrium", etc.) then we may conclude that their goals are the description of phenomena and the successful prediction of events. In this respect, their ends are similar to those of the logical economists, with whom they join against those who deny altogether the possibility of a scientific economic theory and who reduce economics to a simple history of economic phenomena. But while the prediction employed by the logical economist is *qualitative* in nature, the predictions of a mathematical economist must, to be justified in the manner of physics, be *quantitative* and numerical. And in a scientific theory, the validity of its description of phenomena must depend on the accuracy of the predictions which it allows.

We must now consider how the events to be predicted present themselves in physics and in economics respectively, and what is the proper method for their prediction. In most cases, the empirical determination of events in physics is performed by applying the classical procedure for measuring magnitudes. Such measurement makes it possible to select an array of numbers which fully represent the event considered. Each measure of magnitudes postulates a rigid scheme of operations the result of which must never depend upon the time or place of the operation, or on the opinions and interests of the operator himself or of anyone else. Therefore, this measurement of a given magnitude is always repeatable with identical results, and in this sense one can say that the measurement of a magnitude is *objective*. The empirical operation of repeated measuring, in fact, itself implies identical results, modified only by small variations according to the well-known "theory of errors", which we can set aside for the purposes of our inquiry.

In order to measure a magnitude, we must first choose a *unit* of measurement homogeneous with the magnitude itself, and for which we can postulate invariability, at least as far as the measurement is concerned. We must be able to verify for the magnitudes in question the formal properties of the equalities (reflexive, symmetric, and transitive), the inequalities (irreflexive, asymmetric, and transitive), and the trichotomy (given two terms a and b, a must be equal to, less than, or greater than, b). We must define a method of constructing whole multiples and submultiples of the unit of measurement, which is generally, at least in classical physics, a real number or a multiple of real numbers.

From the postulates fixed for the magnitudes there is derived a law of proportionality between the magnitudes and the numbers which measure them. Physics is essentially founded upon magnitudes; it discovers mutual relationships between magnitudes and their variations, and it therefore fits into the universe of mathematical discourse of which the theory of magnitudes (particularly the theory of real numbers) is a part. The compelling nature of the mathematical method in physics appears to be correlated with the regularity and repeatability of observed physical events.

In the realm of economics, a series of events considered to be objects of prediction, appear to be represented by the numerical *prices of* goods in a monetary market economy. Beside these prices, such other real numbers come into play as (in the case of "quantifiable" goods) the number of quantities of goods sold at a particular price. Therefore, in economics as in physics, arrays of numbers may appear to represent given events (e.g., the exchange of given goods at given times and places.)

Moreover, the numbers representing the quantities of goods exchanged may be determined by the methods of measuring magnitudes or by the ordinary rules of using cardinal numbers. As far as price is concerned, the analogy with physics has induced some writers to consider price as the measure of value or of the utilities of goods, and therefore to advance to an even closer analogy between physics and economics. Let us, therefore, consider some aspects of the determination of the prices of goods in the market in relation to what we have previously noted about the measurement of magnitudes.

In the determination of price on the market, we cannot postulate a rigid scheme of operations of the operator. Furthermore, the process of establishing market price, being dependent upon the opinions and interests of buyers and sellers, can clearly *not* be independent of the time and place at which prices are set. The market price of a given good will therefore not necessarily be the same from one observation to another, varying as it clearly does according to historical times and places, and according to the opinions and interests of the relevant operators. We may in this sense declare that the operation of establishing a market price is poly-subjective and non-repeatable. This operation requires: (a) a commodity or service the price of which is to be established, and which is generally, but not necessarily, quantifiable according to the rules of the theory of magnitudes; (b) money, i.e., a numerable set of elements all equivalent to each other, but not homogeneous with the service or commodity to be purchased, and in terms of which the setting of prices takes place; and (c) an historical environment (the market), and at least two operators (one buyer and one seller) who transact the exchange. No law of proportionality can be said to exist between the quantities of exchanged goods (where the goods are quantifiable) and the amount of money for which they are exchanged. (In fact, it happens that prices for large quantities of goods are usually different from the prices of small quantities of the same goods.) Moreover, knowledge of the above-mentioned elements (a), (b), and (c), even when complete, is not sufficient to allow prediction of the price. For we lack an efficient scheme for predicting the behavior of any operator based on his opinions; and we lack also an efficient method of connecting the behavior of any single operator to the behavior of others, and therefore of predicting changes in the various opinions and actions in the process of establishing prices.

We may, therefore, conclude that there is a profound difference between the operation of measuring and that of establishing prices, and that it is unjustifiable to consider the prices of given goods as the measure of the values or utilities of those goods. These differences are connected with the fact that a price in an exchange can only be established if the value assigned by the buyer to the goods he buys is greater than the value to him of the money he pays, *and*, correlatively, if the value to the seller of the goods that he sells is smaller than the value to him of the money he receives in payment. If this double inequality of values did not exist, neither of the two operators would find it profitable to make the transaction, and no exchange would take place—or price be established. Thus, the operation of arriving at prices on the market cannot be considered as also determining a measurement of the values of the exchanged goods. And furthermore, we cannot consider these values to be matters of objective judgment. A judgment of values appears to be defined as a demonstrable inference from observed choices: commodity A has a greater value than commodity B, when commodity A is chosen before commodity B. An exchange of goods between the two operators may, then, only take place when the choice of one is contrary to the choice of the other. It is therefore obvious that judgments of values—understood as assigned orderings of values of the exchanged goods—will depend essentially upon the particular individual who makes the valuations. If one speaks of a "value", one must therefore indicate what operator is doing the *valuing*; values must never be spoken of as absolute, i.e., without referring to an operator. What we have said may be briefly summarized by stating that it makes no sense to speak of an "objective value".

Some of these difficulties are abated in Crusoe economics, where there is only one operator in society, and therefore all choices are made by him, so that the ordering of values is determined by Crusoe's choices only. However, even in this case, the possibility of introducing a mathematical theory of values or of utility seems doubtful. If we put a given operator before a set of goods or a set of bundles of goods, in order to construct the concept of abstract utility, we must know that the operator, whenever confronted with bundles of goods, is always able to give one and only one of three judgments: (1) Bundle A is preferable to bundle B; (2) bundle B is preferable to bundle A; or (3) bundles A and B are equally preferable—that is, the operator is indifferent (*not* uncertain) between the two bundles of goods. This, however, is an empirical assumption, which need not necessarily be valid in practice. For the operator may be *uncertain* as to his preferences for the goods, and these uncertainties will be the more numerous the more the operator's judgment involves his entire economic behavior. But if the operator, who corresponds to the measuring instrument in our analogy with physics, is uncertain, then so must be the economist, who corresponds to the physicist using the instrument. The economist will be in the position of a physicist who does not know if the measuring instrument he is using is in working order.

Nor is uncertainty the only difficulty we face in constructing the concept of utility. For another prerequisite of such construction is that the operator must behave according to the formal rules of the equalities and inequalities; otherwise we could not construct a proper ordering of the utilities. One great difficulty is that the operator's choices between commodity A and commodity B, between commodity B and commodity C, and between commodities A and C, necessarily take place at three different times. The three concrete choices, therefore, may happen to be the results of three *different* sets of value-orderings. In fact, all the choices made during the lapse of time between the first and the last of the aforementioned choices, will modify the economic situation of the operator, and may therefore lead him to modify his opinion of the economic situation and hence to change his value-orderings. And his choices will depend not only upon the goods which the operator is considering, but also upon his opinions of his situation at the moment of his choice. Therefore, the operator's choices could not only defy the transitivity rule, but also could never reveal judgment of preference *independent* of the particular moment in which the judgment occurred. We must here refer again to what we have said about the problem of inadequacy of instruments of measurement.

Setting aside the foregoing considerations, we may now continue to examine the process by which some mathematical economists, starting from the aforementioned theory of choices, mathematically construct a numerical utility, while others formulate the so-called "theory of indifference curves".

If we assume that the economic operator will behave according to the necessary rules (and we have seen that this cannot be demonstrated, and is strongly open to question), it seems possible to take the goods and bundles of goods which the operator has judged to be equally preferable (i.e., indifferent), and to make subsets of them so that all elements within each subset will be equally preferable. It then seems possible to order these subsets by saying that one subset will follow another in which *an* element (and therefore *all the elements) is preferred to an* element (and therefore to *all*) of the other subset. This ordering obviously implies transitivity, which was also implied in the analysis of choice. Some mathematical economists, notably von Neumann and Morgenstern and their followers, after having defined these ordered subsets, construct a concept of abstract utility, by defining as utility the category common to all the elements of one of the subsets. By imposing on the utilities the ordering of the subsets to which they belong, these authors manage to define the set of abstract utilities (relating to the set of goods and bundles of goods being considered) as a properly ordered set. The possibility of constructing a proper ordering for the set of utilities, however, does not imply that this set may be put into reciprocal, ordered correspondence with the set of real numbers or a segment thereof. In fact, nothing has as yet been demonstrated about the type of ordering of the ordered sets of utilities. But here the above-mentioned authors meet the problem by introducing a new set of postulates. They consider two goods or bundles of goods, A and B, with two different corresponding utilities $u(A)$ and $u(B)$, and imagine it possible to consider as a *commodity* chosen by the operators, the possibility of obtaining *either* the commodity A

with probability x, *or*; alternatively, commodity B with probability $1\text{-}x$. After having postulated this possibility, they assume that for any two goods whatever A and B, where $u(A)$ is less than $u(B)$, and where x may be any real number between 0 and 1 (extremes excluded), the following propositions are valid:

(1) $u(A) \quad x\,u(A) + (1\text{-}x)\,u(B)$

(2) $u(B) \quad x\,u(A) + (1\text{-}x)\,u(B)$

and, moreover, that for any commodity C, there is one x for which it is possible to write:

(3) $x\,u(A) + (1\text{-}x)\,u(B)\;u(C)$, if $u(A)\;u(C)\;u(B)$ and, finally, if $u(A)\;u(C)\;u(B)$, that there is one y for which:

(4) $y\,u(A) + (1\text{-}y)\,u(B)\;u(C)$.

Finally, they assume (5) that the combination of above-mentioned relations satisfies the ordinary rules of the calculus of probabilities.

In this way they conclude that it is possible to let the set, or a segment of the set, of abstract utilities correspond to the set or a segment of the set of real numbers, up to a linear transformation, and they thus manage to determine what they call "numerical utility". But by introducing an equivalence between goods that are already certain, and the mere possibilities (each with an assigned numerical probability) of obtaining alternatively two other goods, they have forced the operator making the choice into the mould of a gambler. This imposed assumption must be treated with extreme caution; for can it be empirically verified for the behavior of the usual economic operator (i.e., the man making the choices from which is constructed the ordered set of utilities)? The assumed operator is both a *speculator* (in the sense meant by Professor Ludwig von Mises); i.e., a man who chooses between goods in order to arrive at his preferred goals, and a *gambler*, i.e., a man who accepts alternatives dependent entirely upon chance. On the other hand, von Neumann, Morgenstern, and their followers assume that the assigned probability of the alternatives is not subjective but statistical, and they therefore imply that the operator is somehow correctly informed about the size of the probability and accepts it as given. But it is not proven that these implications correspond to empirical reality, since the operator may have no trust at all in the probability data which are hypothetically supplied to him. He may thus construct subjective probabilities of his own, like the gambler who bets on the roulette numbers which have not come up at all during the evening. Furthermore, the hypothesis that the probability data must have been previously supplied to the operator to permit him to choose between alternative goods, makes all the more tenuous, if not impossible, the empirical validity of this method of constructing numerical utility.

Finally, the further assumptions, (1 - 5) appear gratuitous; we are not told the conditions under which the decisions of the operator would be compatible with these assumptions. These hypothetical postulates appear to be a surreptitious introduction of the very *possibility* of representing utilities by real numbers, which should have been *deduced from* the postulates themselves.

The authors of this theory seem to have been unaware of these fundamental objections, perhaps because they were too fascinated by the elegance of their theory to pay sufficient attention to the empirical validity of the proposed method for calculating utilities. They have not asked whether their constructs fit the actual behavior of the economic operator. This insufficient attention to the workings of their theory prevents us from using the theory to predict the economic choices of individuals. The actual cases studied by the von Neumann - Morgenstern theory are extremely simplified hypotheses that cannot be applied to actual economic problems. If we wanted to follow von Neumann and Morgenstern in their favorite comparison with the problem of measuring temperature, we could say that they have constructed a logically perfect theory of temperature, but have failed to construct any instrument for measuring temperature. The problem of numerical measurement of utility can only be solved when such an instrument has been constructed.

On the other hand, the von Neumann-Morgenstern theory is exempt from many of the naive postulates and logical and mathematical transgressions committed by preceding theories of utility, and it has therefore merited detailed consideration here.

Let us now examine the theory of "indifference curves", which no less than the theory of numerical utility, presupposes what we have dicussed about the theory of choices, including the construction of equally preferable subsets of goods and bundles of goods.

In order to construct the theory of indifference curves (perhaps better termed "indifference classes"), we must construct a space for the set of goods and bundles of goods which we have defined above as the field of possible choices of our hypothetical operator who, as we have repeatedly noted, must correspond to the measuring instruments of physics. Now this very operation of constructing a space is confronted with a serious difficulty: for it has not been proved that the goods forming this set K, by their different quantities and combinations, are all measurable by real numbers. For some goods, the quantity will only be expressed by whole cardinal numbers (e.g., such indivisible goods as automobiles). Other goods will be difficult to express by any numbers, because they can only be conceived as present or not present (e.g., health, life, honor.)

Setting aside this difficulty, and including these goods, a given element of the set K will be represented by: (a) an ordered set of real positive numbers (for which the power, P^1, cannot be established), i.e., a real number for each measurable good, or (b) a further ordered set (for which it is again not possible to establish the power, P^2) of cardinal numbers, i.e., cardinal numbers for each of the indivisible goods, and either 0 or 1 chosen as the number to depict each of the goods that can only be conceived as present or absent. This construct is only valid if we leave out of account all non-quantifiable goods, such as the tang of the air, the respectability of a man, etc.

If we could also exclude indivisible goods from the set, then our problem could easily be solved by letting each element of the set K correspond to a point in a P^1- dimension Euclidean space (provided that the power P^1 is finite). But since indivisible goods are indisputably present, we cannot see a way to construct a space for the set K, a space which would have to be topological in order to define indifference classes in that space. This criticism renders invalid the construction of the entire theory. Moreover, if we assumed it possible to construct for K a topological space with a definite whole dimension q, we could not assume it possible to represent the subsets of equally preferable goods in classes of q-1 dimensions. To demonstrate such a possibility, we would have to verify assumptions every bit as restrictive as those needed to construct a numerical utility. We therefore cannot conclude that such hypothetical assumptions would fit the real behavior of the operator—who seems to be burdened with so many complicated and difficult operations. If it were possible to construct indifferent classes, we could then also determine an index of utility that would be constant over an indifferent class, and would increase when passing from one indifference class to a more highly-valued indifference class. Such an index of utility would be considered a measure of utility up to increasing transformations.

Thus, when we attempted to construct a numerical utility, we had to face the grave difficulties involved in choosing between given goods and probable alternative goods. In the present case, we must overcome the no less critical difficulties of constructing a space for the set K and the difficulties of constructing indifference classes.

We may conclude this analysis of utility theory as follows: to obtain a theory of numerical utility, we must construct a topological space for the set K to obtain a theory of indifference classes. And even if we admit such a theory of indifference classes as valid, we must also introduce postulates about choices between given goods and probable goods. Both the theories of indifference classes and of numerical utility rest on mathematical concepts that are essentially different from any validly empirical view of utility. The adherents of the mathematical theory of utility have not justified their substitution of a mathematical construct for the processes occurring in the real world. The utility which we have called "empirical" is that which governs the actual behavior of human operators, with perhaps the undoubtedly rare exception of those who purposely commit themselves to following postulates of the mathematical theory. At best, mathematical utility theory will only permit us to predict the behavior of these peculiar operators.

The mathematical economists, furthermore, have not sufficiently defined the purposes of constructing their theories of utility, and have not adequately explored the semantic problems involved. If we resumed the comparison with physics, we could say that modern mathematical physics is strictly connected with the impressive construction of experimental equipment. On the other hand, this development has compelled physics to move within the narrow grooves imposed by the range of possibilities of that equipment. As a result, physics has only been able to make successful predictions when the physicists have been able to arrange events in advance. In short, physics has proved incapable of predicting with sufficient accuracy such natural phenomena as the courses of rivers, the phenomena of meteorology, of biology, etc. As far as economics is concerned, the attempts to apply mathematics have not yet involved any creation whatever of experimental equipment to evaluate relevant data translatable into mathematical language. If robots to determine such data were one day constructed, we could still only predict the behavior, not of men, but of the robots themselves—unless we wanted to, and could, transform our human subjects into robots. Unless such transformation be the goal of mathematical economics, such mathematical theories merely encourage the illusion that they may someday predict the behavior of individual human beings in the real world.

It could be objected that calculations based on mathematical utility theories allow at least approximate prediction of economic events. But then, the mathematical economist must provide a theory allowing us to *calculate* the approximation by which each forecast will be successful. If they do not do so, they are hardly in the usual position of scientists using mathematical tools.

In the case of numerical utilities, we are confronted with the problem of comparing the choices assumed by the above theories with the choices made by actual individuals in the real world. We also face the problem of determining, according to an elaborated theory of approximation, the minimum percentage of verified cases. Solutions of these problems must precede any attempt to apply the theory.

Analogous considerations are suggested by such other devices of mathematical economics as demand curves, cost curves, and the like. Let us consider, for example, how the "cost curve" is defined. A producer is assumed to be making a given, measurable commodity. Let us call q the quantity of this commodity which the producer could eventually supply in a given length of time. $c(q)$ is the "total cost", expressed in a given monetary unit, necessary to producing the quantity q in the unit of time. If we let q vary between zero and q' (which we define as the highest quantity producable by the given, existing, plants), and if we assume to know the cost function $c(q)$, and if we represent the consequent relation on a Cartesian diagram, we then obtain a "cost curve" for a given producer of that commodity. If the total cost $c(q)$ is a function of producing the quantity q, then such a cost curve can be constructed, which means that whenever we put q in the interval between zero and q', one and only one $c(q)$ can be determined. Superficially, this condition seems easily satisfiable. Suppose, however, that we inquire how c has been determined as a function of q. We then begin to confront some difficult obstacles. How is the producer going to arrive at his cost function? If he cannot predict it by *a priori* calculation, he must try to determine it experimentally, by trial and error.

We feel that we can exclude completely the possible existence of a producer so devoted to the requirements of economists that he will perform all the experiments required for construction of the cost curve. On the other hand, we cannot hope for the existence of a firm purposely devised for conducting just such experiments. In fact, such a firm would be useless: for the costs of production will depend on the costs of the particular raw materials, the particular equipment, the special geographical location, the particular employment of man-power, the particular wages paid, the particular interest rate, in each particular firm—not to mention the particular production cycle and administrative and commercial organization of each firm. Therefore, any data drawn from the costs of a given experimental firm will hardly be useful for determining the costs of any other firm.

If, on the other hand, we would rely on *a priori* calculation of costs, we are confronted with problems no less difficult than the ones cited above. In fact, no necessary technological calculation could predict the behavior of given equipment under any new rhythm of production, of any new amortization rate, etc. Neither could such problems as supply or finance be precalculable within any useful approximation.

Thus the problem of the actual construction of the cost curve remains an open question, and one which must be solved if we wish to employ mathematical economics. And while a curve may be constructed for a given set of circumstances, we must then change the curve as soon as circumstances change. If the general set of possible circumstances could be unequivocally represented by a definite set of real numbers, we could try to determine the cost as a function of several variables, $c(p,q,r,s,..........w,z)$ where $p,q,r,s,.....w,z,$ are the parameters representing the general set of circumstances. But since it has not been proved that the general set of circumstances may be represented by a definite number of parameters, we must conclude that c cannot even be considered a function of several variables including q, much less of q, itself. If there is a correlation between c and q, we cannot simply assume that this correlation is one of functional dependence of *c and q*. Therefore, we cannot legitimately represent $c(q)$ by a curve or set of curves. And, moreover, if the correlation between cost and quantity of production is not functional, then we cannot apply the rules of the differential calculus, so popular among mathematical economists.

It could be objected that construction of cost curves is a working hypothesis legitimated by experimental verification of inferences from this hypothesis. But such verification can never be attempted without previously defining the function represented by the curve, and we must therefore begin by establishing the laws for constructing the curves. This task has not yet been accomplished. Furthermore, as in the case of utility theory, the mathematical concept of *function* is being substituted for the empirical concept of *correlation* without adequate justification. The semantic confusion between correlation and function is probably caused by the fact that the word "function" has, in ordinary and mathematical languages, two different meanings. Furthermore, the rules of employing the word "function" are not comparable in the two languages.

The same confusion has probably reigned between the use of curves by non-mathematical economists (understood as non-quantitative symbols of the trends or movements of economic phenomena), and by mathematical economists (understood as graphical representations of mathematical functions). While the use of curves in the former sense may be justified, if their meaning is so defined, the use of curves by mathematical economists confronts the grave difficulties stemming from confusion of the qualitative trends of phenomena with mathematical functions. This semantic confusion encourages the illusion that mathematical calculation can yield us descriptions of the empirical phenomena. A similar confusion pervades the other types of curves employed by mathematical economists.

Other doubts about mathematical economics concern its use of the maximum and minimum concepts to solve mathematically framed economic problems. In mathematical physics, the formulations of maximum and minimum are the precise and rigorous results of the theories to which they belong, and are not simply a translation of presuppositions from ordinary experience into the language of mathematics. Furthermore, the usages of the terms "maximum" and "minimum" in mathematics and in ordinary language are so different, that the terms cannot simply be used interchangeably in the two cases. In ordinary language, the concepts of maximum and minimum are not only indeterminate, but incapable of determination. For example, such statements as "the most beautiful painting of painter *X*", "the finest woman in Manchester", "the most intelligent economist in America", or, indeed, "the maximum utility" or the "maximum profit", do not actually define the element which seems to be defined. The meaning of the qualifying adjective is also not precisely defined, and it is therefore not always possible to assign an unequivocal meaning to a comparison, or to a relative or absolute superlative. In mathematics on the other hand, the trichotomy postulates the relations of inequality, keeping us from uncertain judgments, while the transitivity of the two inequalities enables us to formulate the problem of the maximum rigorously and to demonstrate the theorems of existence or non-existence of maxima and minima.

It is often claimed that translation of such a concept as the maximum from ordinary into mathematical language, involves an improvement in the logical accuracy of the concept, as well as wider opportunities for its use. But the lack of mathematical precision in ordinary language reflects precisely the behavior of individual human beings in the real world. Furthermore, it has not been proved that economic operators can or will ever change their behavior to suit the requirements of mathematical precision. Translation of the words of ordinary language into mathematics is therefore not necessarily the most suitable way of dealing with the empirical problems of human beings in the real world. We might suspect that translation into mathematical language by itself implies a suggested transformation of human economic operators into virtual robots. But in that case, mathematical economics would not be a science, but rather a set of vaguely-defined normative rules of behavior, the possibility of which has not been demonstrated, and for the sake of goals which have not even been revealed.

We are reminded here of Macauley's comment on utilitarianism: "When we see the action of a man, we know with certainty what he thinks his interest to be. But it is impossible to reason with certainty from what *we* think to be his interest, to his actions." Despite John Stuart Mill's supreme contempt for Macauley, we know that Mill finally admitted the truth of several of Macauley's criticisms.[2]. The problem with which Macauley confronted the utilitarians faces us still, and one wonders whether the mathematical economists of today, in their own contempt for critics, are any better armed against their criticisms than were the utilitarians against the similar structures of Macauley[3].

NOTES

1. John Neville Keynes, *The Scope and Method of Political Economy* (1st Ed., London, 1891; 4th Ed., New York, 1955).
2. See T. Rees, "A Note on Macauley and the Utilitarians", *Political Studies*, IV, no. 3 (October, 1956).
3. In his extremely valuable book, *The Failure of the 'New Economics'* (Princeton, 1959), Henry Hazlitt subjects the use of mathematics by Keynes and other economists, to a series of strictures very similar to those which had been expounded in this paper. For Hazlitt's criticisms of the concept of mathematical function, cf. *ibid.*, pp. 46, 98 ff., and 290 ff. The author characterizes supply and demand curves as mere "analogies, metaphors and visual aids to thought...which should never be confused with realities", and which do not permit any mathematical calculation. *Ibid.*, p. 102. On the pretentious and misleading use of pseudo-mathematical equations in economics, Hazlitt writes: "And if a mathematical equation is not precise, it is worse than worthless; it is a fraud. It gives our results a merely spurious precision. It gives an illusion of knowledge in place of the candid confession of ignorance, vagueness, or uncertainty which is the beginning of wisdom....But we may go much further in our criticism. Even a merely hypothetical equation may be worse than worthless if there is not only no initial evidence that the posited relationship is true, but no way of determining whether it is true. A mathematical statement, to be scientifically useful, must, like a verbal statement, at least be *verifiable*, even when it is not verified. If I say, for example (and am not merely joking), that John's love of Alice varies in an exact and determinable relationship with Mary's love of John, I ought to be able to prove that this is so. I do not prove my statement—in fact, I do not make it a whit more plausible or 'scientific' —if I write, solemnly, let X equal Mary's love of John, and Y equal John's love of Alice, then
$$Y = f(X),$$
and go on triumphantly from there." *Ibid.*, pp. 99 - 101.
Further references suggested by Hazlitt include:
J. E. Cairnes, *The Character and Logical Method of Political Economy* (London, 1875), Preface to 2nd edition, as the most uncompromising classical attack on mathematical economics, and Ludwig von Mises, *Human Action* (New Haven, 1949), pp. 347, 354, and *passim*, for the most uncompromising modern attack. Also cf. George J. Stigler, "The Mathematical Method in Economics", in *Five Lectures on Economic Problems* (London, 1949).

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COASE AND DEMSETZ ON PRIVATE PROPERTY RIGHTS

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In his seminal work, "The Problem of Social Cost," Coase held that in cases of private property right disputes involving what have been called externalities, "with costless market transactions, the decision of the courts concerning liability for damage would be without effect on the allocation of resources."[1] I shall try to show that this view is mistaken because it does not take account of psychic income. I shall then consider what can only be considered immoral implications Demsetz draws from Coase's view of property.

Let us suppose that the damage to a farmer's crops from a neighboring factory amounts to \$100,000; that there is no way that the farmer himself can prevent the damage to his crops; that bargaining transactions between the farmer and the manufacturer are costless; that changes in the distribution of wealth between them can be ignored; and finally, that the manufacturer can stop the crop damage by installing a smoke prevention device (SPD) which will cost him \$75,000.

Under these conditions, Coase would argue that whether the court assigns crop damage liability to the manufacturer or not, the SPD will be installed. This means that the allocation of resources between farming and manufacturing will not depend on the court decision. This means, moreover, that the value of production will be maximized, since a \$75,000 cost will gain \$100,000. How does this work?

If the court finds the manufacturer liable, and grants the farmer an injunction to stop the smoke pollution, the manufacturer is legally bound to install the SPD (or to cease operation). He will not be able to bribe the farmer into allowing him to pollute: The farmer can only be compensated by receiving at least the \$100,000 which he would lose in damages and the manufacturer can get away with paying only \$75,000 to install the SPD.

If the court does not find the manufacturer liable, then the farmer cannot get an injunction. The manufacturer is not legally bound to install the SPD. But note: The farmer stands to gain \$100,000 (in undamaged crops) if he can convince the manufacturer to do something which costs only \$75,000 (install the SPD). There will be a bargaining situation where a bribe from the farmer to the manufacturer of something between \$75,000 and \$100,000 will make them both better off. For instance, a payment of \$90,000 will save the farmer \$10,000 (the farmer can save \$100,000 worth of crops at a cost of only \$90,000) and will earn \$15,000 for the manufacturer (the manufacturer receives \$90,000 for installing a \$75,000 SPD). What if the farmer just does not happen to have \$90,000 lying around? This is not an insurmountable problem. The farmer does have \$100,000 worth of crops lying around, which, presumably, will serve as collateral for a \$90,000 loan. The farmer will obtain the \$90,000 loan, pay the manufacturer the \$90,000, sell his crops for \$100,000, and then pay off the cost of the loan out of his \$10,000 gain.

Now let us consider a case exactly like the preceding except for one thing: instead of there being \$100,000 worth of crops lying around that can be ruined by smoke pollution, there is but one flower bed that can be so ruined. But this a rather special flower bed (to the farmer). Its pecuniary value to other people is nil; however, the farmer's mother, on her death bed, asked him to care for it. It is so valuable to the farmer in a psychic sense, that only, as it happens, $100,000 would compensate the farmer for the ruination of the flower bed.

If the court finds the manufacturer liable, then the psychic loss case works out as did the pecuniary loss case: the manufacturer will have to install the SPD since he can install for less ($75,000) than what a bribe will cost him ($100,000 or more).

If the court does not find the manufacturer liable, then, as before, a bribe of something between $75,000 and $100,000 (say $90,000) will insure the installation of the SPD. If the farmer has $90,000 with which to save his flower bed, the SPD will be installed.

Coase's view breaks down when we consider the case of psychic income loss where the loser does not have the wherewithal to make a bribe greater than the cost of the SPD ($75,000). All the psychic income in the world may not be enough collateral to support a $90,000 loan to save a flower bed.

In this case, the allocation of resources *will* depend on the decision of the court. If the court holds the polluter responsible, the SPD will be installed; if the court does not hold the polluter responsible, the SPD will *not* be installed.

We now turn to a more realistic example to illustrate psychic income. Demsetz holds [2] that the same citizens would join the military "no matter whether taxpayers must hire military volunteers or whether draftees must pay taxpayers to be excused from service. For taxpayers will hire only those military (under the 'buy-him-in' property right system) who would not pay to be exempted (under the 'let-him-buy-his-way-out' system). The highest bidder under the 'let-him-buy-his-way-out' property right system would be precisely the last to volunteer under a 'buy-him-in' system."

When the phenomena of psychic income is incorporated into the analysis, however, it is by no means certain that "the highest bidder under the 'let-him-buy-his-way-out' property right system would be precisely the last to volunteer under a 'buy-him-in' system." Consider a died-in-the-wool-pacifist who *would* be the last to volunteer under the 'buy-him-in' system because of the extraordinary sacrifice of psychic values a military life would entail. How can we be sure that he would be "precisely" the highest bidder under the 'let-him-buy-his-way-out' property right system? He might be too poor to pay "precisely" the highest bid. He might be too poor to even pay a bribe that would keep him out of military service at all. His reserves of "human capital" might well be so low so as to be unable to borrow money to bribe his way out even if human beings could be used as collateral. In short, Demsetz is correct only if we may safely ignore psychic losses on the part of people who are unable to afford the bribe. Yet this case is one where this procedure would seem particularly dangerous. Psychic, not (so much) pecuniary, losses are likely to be very important; and draftable men are likely to be at a stage in their lives where they are unlikely to have been able to accumulate much capital.

A few words are in order here on the almost revolutionary changes in moral outlook implicit in this view of property rights. In the traditional moral view of private property rights, the "let-him-buy-his-way-out" property right system would be, if anything, a contradiction in terms, and not really a private property right system at all. According to traditional morality, each person is a self-owner. Any attempt to involve the individual in a "let-him-buy-his-way-out" system would necessarily involve *enslaving* him first. To first enslave a individual and to then offer him the possibility of buying his way out would have been thought of as equivalent to asking the individual to pay ransom to his kidnappers. To say the least, this would be anathema to a system of private property rights. And to further declare that "it makes no difference" whether an individual is kidnapped and then offered the possibility of paying ransom or whether the individual is not kidnapped but rather offered employment on a voluntary basis, would have been thought of as just adding insult to injury.

Demsetz considers another interesting case [3]:

> "Whether or not a new product will be profitable is, in the absence of exchange and police costs, independent of which property right assignment is chosen:
>
> (A) Producers of new products are assigned the right to sell new products without compen-

sating competitors who are injured.

(B) Producers of old products are assigned to retain their customers."

I have already argued that this is correct only if negotiation costs, income or wealth effects, *as well as* psychic effects, can be safely ignored. Here I am concerned to point out the deviation from traditional private property views.

According to the traditional or libertarian view, old producers do not, cannot, must not, have any right to retain their customers, if for no other reason than that they do not *own* their customers in the first place. All they own is what they produce. More exactly, all they own are the *physical goods* that they produce. They cannot own the *value* of what they produce, because the value of a good is determined by other producers and consumers, (as well as by their own valuations), but none of these people are owned by the old producers. It is true that the advent of new producers can lower the value of what the producers own. So can the refusal of old customers to continue patronization. So can weather conditions, etc.

According to this traditional view of the free enterprise system, everyone has a right to try to compete. Likening destruction of physical property to the destruction of the value of property by forbidding the latter as well as the former can only be considered a travesty of the free enterprise, private property system.

Let us now consider non-zero transactions costs. Demsetz has advice to give on the assignation of property rights in the case of high transactions costs, where he concedes that court decisions are relevent to the allocation of resources. Demsetz calls attention to realignment costs and holds that they should have an important part to play in such assignments. Realignment costs are the costs of transacting that occur after the new assignment of property rights.

"For example, let us consider the property right problems associated with the introduction of home air conditioners. The question arises as to whether homeowners should have the right to prevent noise levels from rising above a given intensity or whether air conditioner owners should have the right to run their sets even though noise levels on surrounding land will be raised. If it is generally true that owners operate their sets that they will purchase most of the noise control rights from their neighbors, then exchange costs could be reduced by giving the initial assignment of rights to set owners. If set owners are given these rights, some homeowners will contract to buy them from set owners but, by assumption, the number and presumably the cost of such exchanges would be less than under the alternative assignment of rights. A number of sets that approximates the efficient number would be arrived at with the use of less resources for conducting exchanges if set owners are given the right rather than homeowners.[4]

Consider the case of very rich sadists who have a maniacally strong desire to torture poor people; such a strong desire, it might be added, that most sadists would be able to purchase most of the torture rights from their poorer fellows. According to the criteria of minimizing exchange costs, it would seem that the sadists should be given the "right to torture" in the first place. It need hardly be pointed out, except perhaps to the most thoroughgoing advocate of the "Coase - Demsetz" view[5], that granting rights to torture is incompatible with a free enterprise, private property system.

Coase also gives advice on assigning property rights. He considers the case where negotiation costs are greater than the expected gains to be obtained from such negotiations. He holds that: "In a world in which there are high costs of rearranging the rights established by the legal system, the courts, in cases relating to nuisance, are, in effect, making a decision on the economic problem and determining how resources are to be employed"[6].

An example will illustrate: Assume the previous case where installation of a smoke prevention device will cost $75,000, where monetary harm due to smoke is $100,000, where income effects are insignificant, but where the costs of negotiation are $200,000.

If the judge decides in favor of the farmer, the devise will be installed—not because it will not pay the manufacturer to bribe the farmer into accepting the smoke—but because it will be too expensive to negotiate the bribe.

In short, "The courts directly influence economic activity...when market transactions are so costly as to make it difficult to change the arrangement of rights established by the law[7]."

Coase then concludes:

"It would therefore seem desirable that the courts should understand the economic consequences of their decisions and should, insofar as this is possible without creating too much uncertainty about the legal position itself, take these consequences into account when making their decisions"[8].

Coase urges the courts to make "a comparison between the utility and harm produced (as) an element in deciding whether a harmful effect should be considered a nuisance"[9].

In effect, I take Coase to be advising the court to decide in favor of that party which, in the absence of negotiation costs, would be unable to be bribed in the normal course of negotiations. In other words, the court should give the manufacturer the right to belch forth smoke upon the farmer if the monetary costs of installing a smoke prevention device were greater than the resultant monetary harm to crops. And the court should decide in favor of the farmer if the monetary costs of the smoke prevention device were less than concomitant financial damage to crops.

One might fear that such advice is not likely to maximize the value of production; that having the courts "adopt a rigid rule" might well "give economically more satisfactory results" than having the courts follow Coase's advice; that, in reality, it will not be likely for the court to take these economic consequences of their decision into account without creating too much uncertainty about the legal position itself.

First of all, the judges might act "very foolishly" and award the property rights to the wrong person. The task of comparing losses if the externality is allowed to continue, with losses necessitated by the cessation of the externality, is one calling for no mean level of skill. Can it be expected that judges appointed largely through the political process will judge correctly (more than half the time)?

Moreover, there is no market test to ensure that judges who are inept at evaluating relative losses make way for judges who have greater ability.

Even assuming that the courts will not be too inefficient in guessing relative costs, there are still problems with Coase's advice.

Presently, for every legal case that reaches the courts for final judgment, there are hundreds if not thousands of potential disputes that are not tried in the courts. Many cases can be settled out of court based on court precedents. Substituting the "flexible" court judgment of costs for rigid rule will impose extra costs in the form of more cases reaching the courts for adjudication, since precedents are not based on flexible judgments and evaluations.

There is the further problem of added uncertainty and consequent diminished ability to forecast and plan ahead. It is questionable whether it is possible to substitute judgment for rigid rules "without creating too much uncertainty about the legal position itself." The question is a marginal one: at what point do the gains (if, indeed, there are any) of more scope for judgments and evaluations of harm begin to be outweighed by the losses tied to inability to plan ahead?

Two analogies come to mind. One is the concept of "rule of law" associated with Friedrich Hayek. According to this philosophy men are freer contending with publicized rigid laws than with "judgments," "opinions," "estimates." "Laws" that judge "each case on its merits" like this would be more akin to absence of law than to its presence. (One cannot make too much of this philosophy with its emphasis on the *form* of the law and its dis-emphasis on the *content* of law. Laws that sentence all people to death at age forty can be well publicized, rigid, known in advance and are consonant in all ways with Hayek's rule of law; they are hardly conducive to freedom or justice, however.)

The other analogy is from the field of monetary policy. Milton Friedman has long been an effective spokesman for the view supporting monetary "rules" as against monetary "authority." His contention, made famous by the 5% rule, is that it would be an improvement to reduce the myriad activity of the Fed to one of increasing the money supply at a steady 5% per year. The arguments he marshalls are too well known to bear repition here; my point is that these arguments can be seen as defending the view that rigid rules might well be more efficient than allowing judges the "authority" to tinker around and estimate the benefits and harms associated with externalities.

But more important than any of these utilitarian considerations, we must reject Coase's advice because it is just plain downright *immoral*.

It is evil and vicious to violate our most cherished and precious property rights in an ill conceived attempt to maximize the monetary value of production. As the merest study of praxeological axioms will show, it is also *impossible* for an outside observer (the judge) to maximize the psychic value of production. I must conclude, then, with some advice of my own to the Chicagoans, Coase and Demsetz: a study of Austrian economics has great value, apart from its intrinsic merits; it will prevent straying from the paths of righteousness.

NOTES

1. *Journal of Law and Economics*, (Oct. 1960), page 10.
2. "Toward a theory of property rights" by H. Demsetz in *Proceedings of the AEA*. Spring 1967.
3. "Some aspects of property rights", pp. 62–63. JLE, Oct. 1966.
4. "Some aspects", *op. cit.* p. 66.
5. This is not meant so as to obliterate distinctions in the two men's views. It is meant merely as a shorthand device.
6. See his "The Problem of Social Cost," *J.L.E.*, Oct. 1960, Section VII, pp. 19 - 28.
7. *Ibid*, p. 19.
8. *Ibid*, p. 19.
9. *Ibid*, p. 20.

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ORDER WITHOUT LAW: WHERE WILL ANARCHISTS KEEP THE MADMEN?

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As every honest man knows, crime doesn't pay. Our main problem is that apparently no one has yet told the criminals. Crime is our number one growth industry, and currently exhibits such bullish prospects that its present competitor seems content to merely slow its rate of growth. Thus the government would have us rejoice that the alligator is eating us slowly. Such a tremendous achievement with the second derivative of the crime wave should be promptly rewarded by throwing the rascals out. It is time to look at alternatives to our current system, rather than to debate further over who sails the slower boat to Hell. The immediately obvious alternative to State monopoly in the crime and punishment area is a system based on the antithetical social system—anarchy. Thus we are faced with the question, "Where will anarchists keep the madmen?" How will we be protected from criminality in an order without law? If we can answer these questions plausibly and palatably, we will then possess an alternative to the current chaos which prevails under the rule of the State.

Once the State law-enforcement monopoly is destroyed, and the inadequate State protection of person and property is no longer forced upon us, each ex-citizen will have the opportunity to consume protection services according to his own tastes and preferences. If he is a risk-lover, he may reduce his expenditures on protection services far below that level which he was forced to pay implicitly through taxation. If the risk-lover's estimate of the risk he faces and the competitive market's estimate are the same, he may even demand no protection services at all! However, most people exhibit risk-averse behavior, particularly when faced with large-loss, small-payoff risks. Since non-purchase of protection services can be thought of as such a risk, we thus expect risk-averse persons to exhibit an effective demand for protection services.

As in any other industry, there will be specialization on the basis of the economies to be derived from the division of labor. Each consumer will balance his purchases of protection services relative to self-supplied defense so as to maximize his utility. For example, many purchasers of personal and property defense will keep a gun in their homes in order to deal with situations where delayed action by a specialist is useless or less preferred than immediate, though more risky, action by a non-specialist.

Under rationality and profit-maximization assumptions, specialists would organize units tending to the optimal firm size, which would depend not only on technological considerations but on the demand faced by the firm. Demand may be inversly related to firm size above some range, due to the wariness of an anarchist populace of incipient coercive monopoly, which would negate the anarchistic social order by *de facto* forming a State, and necessitating another revolution. This could even be translated to a quasi-technological consideration, by noting that too great a concentration of power will lead to a debasement of defense services and a tendency to coercive behavior. The market will regulate the size of these firms, which we will call *defenders*, or *defense*

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companies. Since the provision of defense services will be highly labor-intensive, and, in poorer neighborhoods, supplied on an exchange-of-labor basis, the optimal size will probably be fairly small.

These defenders will compete, regardless of whether they are organized along capitalist or communist lines. There would exist a competition between these two and other economic lifestyles. This would be reflected by commercial competition between producing units organized in accordance with differing economic theories. Capitalist and communist bakeries, shoemakers, and defenders will all be thrown into the competitive arena in search of customers.

It is important to note here that a competitive social system does not imply capitalism or deny communism. Indeed, it would be most unanarchistic to deny to communism or capitalism or any other theory the opportunity to compete as economic systems. Many anarcho-capitalists and anarcho-communists, though, mistakenly assign the ills of society to the particular economic system, when the real problem is that one or the other system is nominally enforced or heavily supported, and invariably perverted beyond recognition, by the State, a monopoly, and that this State enforces a system of property rights that would not prevail in an anarchy. Capitalism and communism as pure economic systems, as production schemes agreed to by the participants without coercion, with free transfer from one system to the other in one or all facets of one's consumption or production activities, will be tolerated by every true anarchist. The function of the anarchist is not to dictate an economic system; it is to destroy the State in order to allow all economic systems to compete on a voluntary basis.

I emphasize this point, first, because our more narrow-minded anarchists have traditionally fallen into irrelevant arguments in this area, and, second, because I want it to be perfectly clear that my subsequent analysis, though it is couched in free-market terms, does not indicate a preference on my part for one economic system or another.

The differences in individual firm structures will obviously follow client preferences for protection supplied by the various types of firms. Regardless of the theme of their internal organization, the firms will compete on the open market, via both money or labor based price competition and competition between the various economic lifestyles *per se.*

The individual company will supply protection and enforcement services directed at the defense of its clients and their property, but competitive pressures would exist inducing the company to move toward whatever property system predominates after any initial redistribution and expropriation accompanying the demise of the State. Each company would define its own enforcement area, but competitive pressures as outlined later will induce the company to adopt an enforcement area calculated to minimize non-productive strife and maximize profit. Given some system of land tenancy (as well as water and air tenancy), the company's enforcement area might include the geographical area defined by its clients' land, and the clients' persons and mobile property regardless of geographical location. I do not propose to force this definition on anyone, but conjecture that the competitive solution would approximate such a definition for most firms.

It is irrelevant to us whether the company peddles a uniform protection service over its entire enforcement area or caters to special enforcement demands. All conflicts among clients of the same company would be settled internally by the company, regardless of congruence or lack of it between the codes enforced under the conflicting parties' contracts. Conflicts involving clients of different companies would be handled independently of the spectrum of codes enforced by either company. The code that each client engages the company to enforce can be thought of as *the* code of the company, in all cases involving that client, without loss of generality. We must logically examine only the case of conflict between clients of different companies, the codes concerned being different by assumption.

Postponing the more critical questions here, let us assume, just for a moment, that the alleged offense is contrary to the codes of both parties' companies. We must resolve the problem of securing an arrest in an anarchy. Would the accused's company allow the plaintiff's company to arrest or detain its client, and what would be the accused's company's response to an arrest already accomplished?

It is obvious that defense companies will anticipate such problems, and establish a policy for such situations. It will be competitively essential to allow the arrest of one's own client, under qualifying circumstances enumerated later. Any company which refused to allow another company, acting in presumed good faith and with presumed good cause, to arrest their clients would suffer in several ways.

First, and most obvious, is that the other companies will likewise contest any attempt by the offending company to arrest their clients. The offending company will then either be powerless to protect its clients against the opposing companies' clients, or it will be forced into a violent confrontation with other companies. Continued involvement in such frays without excellent, and publicized, reasons will drive away one's most risk-averse clients, as would the other alternative, reciprocal impotence.

Second, inasmuch as criminals tend to migrate somewhat due to the unstable nature of their "trade", every defense company will find it vital to maintain active working relationships with the other companies in the area. To effectively apprehend criminals, a co-operative information and apprehension network, or some sort of inter-company bounty system, will no doubt arise. Recalcitrance in handing over a suspect, or unreasonable actions taken to secure his return, will generally damage or destroy these essential working relationships.

Third, refusal to surrender a suspect would attract criminals seeking to secure contracts with the company. The company will thus be thrust into confrontations more and more often, and will gradually be destroyed.

In fact, a defense company will probably be quite diligent in the pursuit of its own clients who have violated other codes. If another company apprehends one's client and proves him guilty of a serious crime, there is always room for doubt as to whether one's company shelters criminals. It might even become a matter of courtesy to allow the accused's company to make the arrest itself in many cases!

If a company believes its client to be innocent, it serves its own best interests by allowing the client to be arrested. This does not imply that the client will be abandoned. The company could post bail for its client or arrange this with a bail bondsman. Such bail service would no doubt be demanded by the risk-averse as a hedge against the risk of erroneous arrest.

Even if the company believes its client guilty, the same pressures compel it to allow his arrest. In a competitive situation, refusal will entail risks of a higher order than any risk or loss they might suffer as a result of the guilt of their client. In addition to the previously stated incentives to co-operate, we must consider that if the company feels that its client is guilty, then there exists information supporting that conclusion, which if not public knowledge, may at any time be made public through an information leak. Thus the company not only alienates itself from commercial relationships by its refusal, but may risk having all belief in its good faith shattered by information leaked by an employee acting either out of his own moral convictions or for money.

Anticipation of such conflicts will generally lead to formal procedures agreed to by most companies in a given area concerning the limits of reciprocal powers of arrest. Similar "treaties" will develop to define procedure in several other areas as well, assuming that the companies possess some small degree of foresight, an assumption implicitly denied by most critics of anarchism.

This system will benefit the accused criminal in several ways. The likelihood that he will be mistreated will be minimized. Today's barbaric legal system can hold a man in a cage unfit for humans for months before and during his trial, closing its eye to perversions and racketeering, and winking that eye at the brutal sadism of some of its employees, solely by virtue of its monopoly position. No force comparable to that wielded by the government can be exercised today in defense of the accused or convicted. In an anarchy, the accused would have access to an agency with powers on the same order as the arresting company, which would take a direct interest in his welfare. Further, if a company has a reputation for abusing prisoners, other companies will thus be provided with a legitimate ground for preventing the arrest of their clients, and will be able to thwart the offending company's enforcement efforts without the loss of respect and working relationships that non-co-operation would generally entail. The only sound position competitively is for the company to be able to point to its humane treatment of prisoners to prove to all that the innocent have nothing to fear from them, and therefore that any company refusing to allow them power to arrest must be harboring a man it knows to be guilty.

The availability of bail would be determined by the competitive mechanism. No longer would arbitrarily high bail be set by bigoted, venal, or politically-motivated agents of a monopoly. A profit-maximizing arresting company would usually demand bail which would allow it to make a satisfactory settlement to the victim or his heirs, cover all costs incurred in the case, and provide it with a satisfactory profit. It is then a minor concern to it if the defendant does not show up at a hearing or if the other company can not be brought to the negotiating table.

It would then fall upon the accused's own defense company to supervise him while he is on bail. At its option, and if the accused agrees either at the outset of his contract or as a precondition for bail, the defense company may decide to confine its own client. This would be an internal matter involving contract and presents us with no problem.

The accused would also, for the first time in history, regularly have investigative agencies working on his behalf which wield powers on the same order as those of the arresting company. Deliberate as well as accidental conviction of the innocent would be far less feasible. Falsification of evidence will be considerably more risky, and would entail the destruction of the offender. The current disadvantage imposed on the accused today by the practice of the government police of pursuing only leads which tend to strengthen their case while ignoring evidence of innocence would be eliminated. Only a competitive system can insure impartiality.

Having now laid a framework for further analysis, let us drop our earlier assumption that the alleged offense be prohibited by the codes of both companies involved. We will now deal with cases in which an offense is alleged to have been committed by a person whose own defense company enforces no prohibition of that particular act over the accused. Obviously, many such acts will be quite minor, and profitable to prosecute only if repeatedly committed. In such instances, the first offense will often be punished by merely a warning to the offender and/or his defense company, or by expulsion or banishment for a period of time of the offender from the accusing company's enforcement area. The accused's defense company will generally not be involved, unless there is a disputation of fact. We will not consider such minor problems here, for the accused is not deprived of property or liberty, beyond that liberty lost as a result of another's exercising his own liberty to ban the offender from his land. Let us consider a more serious case.

Utilizing the renowned capacities of the economist for unlikely assumptions, I will posit that I and my readers might, in an anarchy, form a defense company. Let us further assume that one tenet of our code is that information and the judicious withholding of information are economic goods and that trade in these goods ought not to be prohibited. In simpler terms, we do not recognize blackmail (as distinct from extortion) to be a crime. So long as we only peddle silence to each other, we run afoul of no other companies. However, suppose one of our brasher young members attempts to blackmail a person not sharing our free trade philosophy. We will then face a conflict with this person's defense company.

Our response is solely a matter to be determined by our own preferences. It may be understood among us that in such a situation we will only provide counsel and normal investigative resources to the offender, and allow him to be judged under the provisions of the arresting company's code. This path may be distinctly advisable when one's code differs substantially from the bulk of the codes in the area. Anarchy merely facilitates living as one wishes with minimal interference; it cannot guarantee one the freedom to impose his ideas upon others, and it cannot protect one against an overwhelmingly superior force which one has antagonized by attempting such an imposition.

Another recourse is to negotiate for our associate's release. This will generally afford good prospects for success, because profit-maximizing companies will push for a monetary penalty for most offenses. A profit-maximizer will usually have no interest in incarceration *per se*, but would advocate it largely to insure the eventual restoration of monetary value to its clients, under a mechanism to be described later. Such a monetary penalty affords a convenient base upon which the arresting company may justify its charges, or its share of the settlement, to the client. Failing such settlement, though, we are left to the previous option of allowing our associate's judgment on the company's code or some compromise criterion, or on re-taking our associate by force.

A decision to re-take the prisoner by force would entail relatively great expense and risk. Against the cost of recovering our man, we must balance the seriousness of the penalties likely to be imposed upon the offender, and the potential loss of clients or members if we take no action. We also consider the degree of support that we can expect from other companies, and our chances of eventual success. Obviously, in the case we have assumed, we will have virtually no support from other companies, our chances of success are virtually zero, inasmuch as many other companies may combine against us, and potential loss of members is small for we are all enlightened and realize the folly of forceful action in this case.

However, if one of us were visiting Southern California, and inadvertently violated the Holy Shrine of Ishtar while searching for a water fountain or pursuing one's own innocuous path, and if the Ishtar-worshippers felt that this merited the death penalty, the situation would be reversed. The penalty is now unreasonable, support from other companies will now be more easily obtained, and we stand to lose many of our members through inaction. We either seize our client by force, or, if his execution is not imminent, demand and receive by virtue of the superior force at our disposal, his release with only a warning, a fine, or some reasonable penalty.

Thus we see that, under an essentially profit-maximizing strategy, a defense company is led to allow other codes to be enforced over its clients when they are in other enforcement areas, so long as the code seems reasonable or their client consents to be subject to it. Codes differing in the extreme from the bulk of codes enforced in a given region would be able to function as a means of resolving conflicts among their adherents, but would be limited in their ability to effectively restrict non-adherents. The penalty extractable from a person who violates an extremely non-standard code would vary, depending upon the clarity and extent of the public dissemination of the restrictions, and the likelihood that the offense was not perpetrated deliberately in direct defiance of the code.

There would not and could not be any uniform code in an anarchy, unless we secured unanimous consent from hundreds of millions of persons, which is rather unlikely. There would, however, be a tendency for codes to standardize, especially in minor detail, due to considerations of transactions costs and the costs of maintaining a stock of knowledge of other codes. Difference in codes would persist only in those areas where the demand for non-standard enforcement over-rides the economies of standardization. These areas would consist largely of enforcement demands based upon moral and religious convictions, which, while not irrational, can be classed as non-rational and not subject to profit-maximization behavioral assumptions. Thus, a substantial move toward standardization would occur in the treatment of crimes of violence and infractions of commercial codes, while diversity would persist in the demand for mores-enforcement. It would in general be profitable for the company to expend some capital to increase the awareness of non-clients with reference to code differences, in the anticipation that the number of offenses, and with it the difficulty of maintaining a non-standard code, would decrease.

Thus we have a brief sketch of the structure of a non-monopolized defense industry. The actual process of judging the alleged offender and enforcing a penalty can now be derived along similarly voluntaristic lines.

The judging mechanism would be arranged by mutual agreement among the companies and individuals involved. Inasmuch as either the offender or a substantial bail would be held by the arresting company, there are strong inducements for the defending company to act in good faith and settle the dispute as quickly as possible.

In most disputations of guilt or innocence, and in some cases of negotiation of a penalty to be assessed in penance for an admitted offense, it would serve both companies' interests to employ an impartial arbitrator. Arbitration would cut time and expense associated with negotiation, especially if both parties are convinced of the merits of their case, and the company would often be able to avoid being directly blamed for a settlement unfavorable or unsatisfactory to its client.

The arbitrator would be employed to end disputes. To that end, he may demand the right to enforce, and be paid for enforcing, his decision. In such a case, the arbitrator would himself employ yet another defender.

The arbitrator need not be selected anew with each case. Several companies may agree in advance of any conflict among them to employ one arbitrator in all cases of a given type that arise among them. The arbitrator thus becomes a tribunal of last resort under an agreement from which any companies may exit, assuming there is no case in progress.

The rules of evidence could be set either by the companies through mutual agreement, or by the arbitrator. These rules would tend to standardize quickly in minor detail, of course, although the admissibility and weight given to tape recordings, hearsay, polygraph, and other types of inconclusive yet often investigatively useful evidence, and other questions of this order of magnitude would probably not be resolved to all companies' satisfaction. In the absence of agreement between the companies as to rules of evidence or procedure, the arbitrator would generally settle that dispute also, and in effect set his own rules.

The arbitrator then decides the guilt or innocence of the accused, and determines a penalty. If the accused is acquitted, the penalty falls upon the arresting company, and would involve compensation of the accused for his inconvenience, the size of the penalty depending upon the degree of the estimated inconvenience, and on the certainty with which the arbitrator pronounces him innocent. If the accused is found guilty, the penalty falls on him or his defense company, as arranged, and would involve restitution to the victim or his heirs, to whatever extent possible, of the value lost by the victim, plus payment to the arresting company for expenses incurred in the arrest, confinement, and prosecution of the accused, plus profit.

Two obvious alternatives present themselves at this point: Either the convict is able to pay off his judgment, or the burden falls on his defense company, which arranges with the convict a scheme of repayment of the judgment to the company. In the former case, if the judgment did not require that the convict be confined, or pay his judgment from earnings from a penal agency as outlined below, then the convict will have literally paid his debt to the ones he has injured, and the case if closed, so far as we are concerned.

In the latter case, though, what options does the company have? They could allow the convict to work out his judgment at his previous occupation, under varying degrees of security and supervision ranging from probationary to work-release schemes. The determining factor here is the company's willingness to assume risk. If the company is unwilling to take a risk on the client, then penal specialists will be employed.

Several penal specialists would be invited to make offers of employment under security conditions to the convict, who would be free to accept any offer which would allow him to settle his debt to his defense company. The convict could quit at any time and be remanded to the custody of his defense company. Thus he would be assured mobility, and would therefore receive a competitive gross wage equal to his marginal product. From this wage would be deducted the penal agency's overhead for security provisions plus profit, and the agreed repayment to his defense company. He would remain free to spend the remainder of his wage as he sees fit. His mobility would preclude penal brutality.

Alternatively, the penal agency may be willing to assume the risk of not being able to get the convict to produce, and so purchase the convict's debt from the company, with the convict's consent, and then arrange repayment with the convict. In such a situation the convict would generally retain a defense company, perhaps the same company, to assure him of mobility by standing ready to repay his unretired debt and so terminate his arrangement with that particular penal agency if the convict so desired. This likewise would preclude penal brutality.

Such a system has several distinct advantages over the present prison system. If we assure mobility and a competitive gross wage, then the effort expended by the convict is directly rewarded with a shorter period of confinement or probation. He would have an objective yardstick by which he could measure his progress. The present parole system administered by often corrupt, bigoted, or politically minded minor bureaucrats would finally be put to death. Prisoner morale would improve, making eventual rehabilitation easier.

As an extension of this point, the convict would be shown directly the value of education. If he committed his particular offense primarily because he had no trade, he will find it to his advantage to learn one. The penal agency may supply education on a profit-making basis, or allow profit-seeking educators to do business within their walls. Thus the convict would have a better chance of returning to a normal life when he regains his freedom.

The penal colony would also generally continue employment of the convict after he has retired his debt. It would be foolish to in effect fire a worker with experience simply because he has now regained his freedom. He will still remain employed by the penal agency but will become free of security restrictions and will be an ordinary worker. Indeed, an agency which does provide employment for "graduated" convicts would have a strong competitive edge in the recruitment process.

The convict will have a direct incentive to exhibit good behavior. The better risk he appears to the penal agency, the more likely he is to be allowed parole or other freedoms in the interest of increasing his productivity. Good behavior will be rewarded monetarily also, reflecting such declines in marginal cost of security provision as reduced wear and depreciation of guards.

Finally, the agency would be responsive to the demands of the convicts, for they are mobile employees, and not literally prisoners. Thus, with whatever net wage they keep after making their agreed-upon payment to the penal agency or defense company, the convict would be allowed to purchase goods from the non-prison main economy, subject naturally to security constraints, thereby eliminating the current extortion and black marketeering rampant in our prisons. Visitors and mail would no longer be arbitrarily cut off. Conjugal visits, or in some cases the moving of one's family into the prison, would be allowed. Our analog to prison would not be, as today, a brutal institution primarily functioning to teach brutes how to be more brutish, but would become almost a treatment center, a place to learn how to live peaceably in outside society. Our present system only teaches a person how to live in prison.

Thus I have outlined, as far as space permits, a competitive, free-market defense system. This is by no means, though, the only way that an anarchy might be organized; I hold simply that such a structure will be likely to emerge from a competitive free-market environment. Such a market structure is amenable to organization under capitalist, communist, or any voluntary scheme of economic organization. It allows the greatest freedom for the greatest number, so that they may pursue the greatest good as they see it. Even where it restricts freedom, the anarchist system teaches the temporarily unfree to live at peace in a free society.

From a macroeconomic standpoint, the anarchist system will be a radical improvement over the current system. So-called "crimes without victims" would no longer be prosecuted as crimes, and the serious crime currently stemming from monopolies in the various vice trades would be eliminated. More first offenders would be educated and rehabilitated than under the present system, and there would be direct profit incentives to keep youthful, casual offenders away from hardened criminals. The forced restitution under the anarchist system may convince some that crime indeed does not pay. Greatly reduced resources allocated to the defense industry will release capital and labor to be employed elsewhere, and the elimination of the State bureaucracy will lift a great dead weight from all entrepreneurs, capitalist or communal alike. A thus rapidly expanding economy should alleviate poverty to some extent, as would the re-distribution of government assets. This would tend to depress criminal behavior. Finally, the performance of competitive suppliers of defense should easily outperform the old State monopoly, providing a superior product at a lower price in a free market.

We are faced with a classical choice: monopoly or competition? As the monopolies in other markets were found to be intolerable, soon the monopoly on the defense industry, the State, will be found to be intolerable. There is an alternative to the State system; an order without law, a truly free society, and that society is anarchy.

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EQUALITY AND EQUAL OPPORTUNITY*

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Not even the most doctrinaire egalitarian will deny that heredity affects, if it does not determine, individual intelligence, strength, vitality, and the capacity to develop certain skills. There are three other dimensions of inequality, however, which are universal, and yet commonly over-looked or even denied. To what extent their basis is phylogenetic may be open to debate, but beyond question is the fact that all three are deeply entrenched in acquired human nature.

First, everywhere and in all times males are dominant over females—despite current fads in American cartoon humor. The so-called matriarchal societies have been cited as an exception, but these are in fact only matrilineal. There as elsewhere, in Lionel Tiger's words, the public forum is a male forum. Institutional life is controlled by males; only males apparently have the capacity to "release followership behavior" in the critical areas of economic activity, defense against outside invasion, and maintenence of internal order. Only men form those "bonds" upon which hierarchical arrangements are founded.

Second, children are universally subordinate to their parents. Like male dominance, this condition can also be found among the other social animals, notably non-arboreal apes. The human case is, of course, complicated by slower maturation and the peculiar need to master the arbitrary symbols of language. The young must be inculcated with the basic values and traditions of the inclusive group while being trained in those skills required for taking their place in that group as functioning adult. Adults are motivated to expend time and energy in these tasks by an expectation that some measure of authority and normative respect will accrue to them.

Third, there is a universal struggle for dominance among adult males. The ethologists have conjectured that such behavior is "programmed" in male behavior phylogenetically; it can be found among all those apes who presently face ecological conditions similar to those man's proto-hominid ancestors experienced. Individual fighting ability has its place, but most of the fighting *within* the troop, territorial group, or clan, is "ritualized," and it is not clear that size and strength are in every species of paramount importance. Strength of "will" may be the sovereign factor, supported by an ability to enlist the aid and cooperation of other males within the hierarchy of dominance.

According to Robert Ardrey and Konrad Lorenz, aggressiveness and the establishment of dominance serve many essential functions. Individuals thereby are spaced over an available habitat. The frequent breeding of genetically superior males is ensured. An order of dominance provides leadership and discipline. Quarreling and sporadic fighting are reduced in scope. Females and juvenile males find protectors. The problem of defense against intra- or inter-specific enemies is more readily handled since the disposition of, say, a baboon troop, is settled in advance; the dominant males face the foe directly, those lower in rank position themselves at the flanks, and the ones needing protection huddle in the middle. A sort of noblesse oblige price is paid for dominant status, an obligation to run

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the major risk in defense and, in some instances, cooperative hunting of dangerous game.

Dominance once achieved—and in all animal societies rank is competitively settled fairly early in the male career—is not vulnerable to continuous challenge, and is in fact granted a kind of "legitimacy." When a dominant baboon approaches senility, for example, his leadership may be increasingly disregarded as younger males achieve prominence, yet he will still be accorded what can only be described as respect and a measure of deference.

Perhaps the most important fact to note about primate status and dominance—and presumably about our proto-hominid ancestral ranking as well—is that it is all achieved. Apes and monkeys pass on only genetic superiority or inferiority. They do not transmit status as such, so that social life affords a scope to equality of opportunity that is unknown among men. The uniquely human inheritance of status has played a complex role in history, at once buttress to continuity and order and also a constant potential for envy, resentment, and even rebellion.

A minimal interference with primordial equal opportunity is inevitable. Whether the basic family organization is consanguineal or conjugal there is an obvious tendency as well as motivation to aid close relatives, especially one's own children, in the struggle for status or rank. Under the simplest of conditions, most fathers encourage and teach their sons to excel if possible in whatever economic and warrior skills are prized. With the advent of extensive property relations both the effort and the transmission became much more marked.

For the same reason even the modern division of labor, which vastly expands opportunity, cannot grant completely equal opportunity. Certain specialized skills and especially supervisorial functions require a preliminary training and conditioning that cannot be—at least are not—delayed until either a small child's talents or his capability as a natural leader have been manifested. In one family but not in another a child will be encouraged, taught, prepared for and subjected to standards of behavior such as thrift, application, deferred gratification, personal achievement, and the discipline of impulse required to manipulate the personalities of associates. The nursery can bestow a competitive advantage even when inheritance of both superior genes and class status are lacking.

Throughout history *direct* inheritance of status, however, has been the general rule. The stage has constantly been set for a status-envy and status-hostility which are lacking, so far as can be described, among social primates. The types of inequality previously noted, male vs. female, child vs. parents, and male vs. male *without* ascriptive priviledge have throughout most of history been accepted or at least tolerated. All of them and others are now bitterly contested, but that is an emergent condition of the modern world.

Direct inheritance of status, which narrowly restricts and confines a majority of men in the social struggle, has never gone uncontested. The Covenant of the ancient Hebrews guaranteed all men equal justice in the sight of God, whatever inequalities might be preserved among men, and it was the inequality of slavery which most stirred their conscience. The idea of one man owning another never went unquestioned among the Greeks, despite the sophistical reasoning presumably based upon assumed economic necessity that was indulged by Plato and Aristotle. Indeed the Stoics characterized slavery as an unnatural condition and affirmed the equality of all men—by which they meant that common humanity takes precedence over human differences, which they did not deny.

Even earlier Isocrates had noted one key distinction between equality and equal opportunity: that which gives to each man his due. This notion, of each man's due, has provided continuous tension in the Western tradition. The almost equally continuous effort to restrict the notion of what is due to already established rank has never gone unchallenged for long. A man's due has generally been compromised by his birth into one stratum or another, but the record of protest on one hand and strenuous attempts to rationalize things-as-they-are on the other makes plain that uneasiness never has been quelled when some men have been categorically denied the opportunity to strive to attain to this or that standard, when, in short, they have not received their due.

At the same time, we know that the human being has an innate tendency to form social hierarchies, a phylogenetic impulse that Lionel Tiger has called the male-bonding propensity. But we also know that in the hunting - gathering stage of human development, as presumably among the proto-huminids, any hierarchy had an extremely low profile and was never hereditary: each individual had to prove his capacity to lead or stand in a special relationship to the leader that was earned. Hereditary status awaited both settled horticulture and an economic surplus. In Africa, Asia, Europe, and South America much the same kind, and extent, of hereditary status independently emerged. Rigid class orders, of an inclusive straight-line type, were superimposed upon the division of labor. The fact of their universal appearance indicates that they, too, were probably inevitable.

Under conditions of advanced industrialization, however, neither classes as such nor an inclusive straight-line organization of occupational status are functionally appropriate, and perhaps they are not even possible. Arthur Koestler's dictum, "Wherever there is life, it must be hierarchically organized," applies to social as well as organic life. But organization in complex entities of neither kind is of the inclusive straight-line type. Within complex organisms there are holons, subordinate anatomic-physiological configurations which assume temporary independence and precedence in certain situations, and "feed back" consequences and information to higher centers of control.

Likewise, in complex industrialized societies the inclusive straight-line hierarchy, which characterized later pre-industrial societies, is replaced by several interlocking hierarchies, and control by higher authority is both specific and limited. To some extent each holon—school district, water authority, fire brigade, local factory of a corporation—operates, must operate, as an autonomous, self-contained unit. The worried master class in the Soviet Union, faced with the threat of systematic breakdown, have with whatever ideological reluctance increasingly sacrificed inclusive straight-line control.

Even in Russia, the government can no longer remain the sole power center. Organizational interdependence, as Peter Drucker has pointed out, is the major pressure now being exerted within advanced economies. Further, he says that across such "pluralisms" worry fades about precedence or place in the general scheme of things. There is no "power elite," or any other kind of elite for that matter, in modern America. The successful businessman, the top rock musician, academician, or Air Force general, knows where he stands, and can be placed, only within his own bailiwick. No one really outranks anyone else, except in his own field, and for that reason the etiquette of precedence has become a lost art.

And so, while inequality is necessary and inevitable, it need not be rigidly organized, nor in an inclusive straight line. Most certainly, inequality need not be spelled out on the basis of social class. We hear a great deal about social class today, but interest in a social phenomenon, as Pitirim A. Sorokin pointed out, more often than not tends to wax with the decline of that phenomenon. In any event, whether Marx, or W. Lloyd Warner or C. Wright Mills is called to testify, no good case can be made for America as class society.

The weight of the evidence is on the side of the nay-sayers. Inheritance of status has been reduced to perhaps a minimal degree, and could be reduced much further only by the elimination of our family system—a rather Draconian measure. A class system is always supported by law, but American law has stripped away almost all special privileges or "immunities" —except those of labor unions, which have been expanded. The drift in law now questions the right of testation, protects tenant at expense of landlord, and sanctions a political redistribution of income. The "socialization of law," according to Roscoe Pound, has been achieved in the United States and Great Britain.

A continuous high rate of mobility, in space and status, has broken the ancient identification of person with place, which even in the past was never so secure in this country as it had been in Europe. But a class system requires something more than legal support, and that is inheritance of estate by the few and a sort of "inheritance" of Old Home Town by the many. Psychologically, class is maintained by recognition of social inferiority and superiority within a community where people have known one another for years, even generations, and where such acknowledgement is attached to and assumed by total personalities. Today, very few people off the job. The social world off the job feriority or superiority acknowledged relates to the job, and very uncertainly to those same peope off the job. The social world off the job does not encompass them in a structure of status. In a highly mobile world anyone, off the job, can readily be avoided, and he cannot command deference.

This is not to say that rank has disappeared, only that rank in any real social-class sense is gone. Obviously some people still have more money, prestige, and power than others. But superior rank in the modern context is a function of the division of labor, not of social class, and the operation of such rank does not tread heavily on the lives of others. At the same time, it has become of paramount importance. Research shows that occupation is precisely the sovereign tag with which modern Americans rank themselves and others, even though, as we have already seen, who ranks whom in a different field or organization is becoming difficult to ascertain. It is not who you are (family) or where you are from (place of birth) which serves as primary identification: it is what you do, and this you can do as readily in one place as another.

No social system is ever going to achieve completely equal opportunity so long as the family institution endures. Nevertheless, the range of inequality continues to contract, along with family influence. Inheritance tax policy weakens family retention of status. Inter-generational studies have shown a rapid deterioration of wealth-transmission from father to son and especially a tendency for top-ranking professionals and business executives to be drawn from families where the father worked in a different field, or held an unrelated and lower post, or both. The availability of tax-paid higher education to all who can qualify, and many more besides, makes access to high occupational position relatively easy. The evidence is clear that being "born well" less controls one's opportunity to succeed than ever before.

The achievement of nearly equal opportunity does not destroy inequality. The division of labor cannot dispense with it: the irreducible minimum is that required to get the world's work done. There are some who must do an organization's detailed and routine work. Others must supervise and integrate that work. Still others, very few, must plan the organization's goals and enforce norms of operational efficiency. No holon is exempted from these necessities, any more than is the inclusive organization of which it may be a part. If not exactly command, there must be autonomy and capability to enforce direction of the activities of others. The general upgrading of skills and income has for many tended to obscure one point: the proportion of those in leader or manager roles remains constant, and by the very nature of organisation must remain constant. Ideology does not affect the matter nor does revolutionary yearning.

In the absence of social classes by any significant definition, can the division of labor by itself form the basis of social as well as occupational organization? Yes, provided that the ranks within it are understood to be legitimate, especially if the belief is widespread that those who occupy high positions deserve them by reason of their indispensable contribution to the common good. But with the accelerated egalitarian drift this belief is much less widely held than heretofore; it deteriorates in those who hold high position as well as those who do not.

The evidence appears in manifold guise. Many, particularly younger, business executives shirk their essential tasks in order to spend time and energy upon "social problems" for which they have neither competence nor responsibility. Studies which compare older and younger executives indicate a diminishing urge to strive for both personal aggrandizement and organizational efficiency. Salaries and wages, *before* "progessive taxation," are tending to contract among various layers: as between professor and instructor, between skilled worker and immediate supervisor. More important, the educated young in large numbers are in flight from where the action is, business management, to tax-maintained protected slots in the educational - welfare bureaucracy. When did you ever hear one of those bright kids on College Bowl announce that he intended to go into business? They all want to teach, head for a foundation, or work for the government. Whether the misinformed cliche used for rationalization be executive suite or gray-flannel suit or stultifying conformity, an increasing number and proportion of our college graduates want no part of business and industry. Such distaste runs highest in the large eastern prestige universities, and one consequence is the steady displacement of old-school tie types in the highest echelons of management with first-generation collegians who graduated with a technical training from some state university.

How much the leftist ideologues who have dominated our liberal arts faculties for four decades are personally responsible would be difficult to prove, but the fact is clear enough: a growing majority of college youngsters at least verbally scorn striving for success—and by statement or implication those who have succeeded—in favor of what they call service or helping others. Not many will consider the possibility that they might serve and help others more effectively by helping to augment the national wealth, and not too incidentally their own, than by signing petitions or taking case records of the voluntarily unemployed or even by joining the Peace Corps.

The thought of striving hard for self-gain, of being dissatisfied with a modestly comfortable career, in short of achievement, stirs deep guilt in many of them. Such guilt reflects an inner struggle between older values of self-validation in career success, for which the Protestant Ethic serves as shorthand, and newly emergent values, egalitarian-leveling values which contest any mark of superiority in self, other, or even way of life. These new values are not structured, indeed are almost inchoate, but what lies behind an apparent floundering after this or that specific neo-liberal fad is consistent enough: a gathering urge to destroy the standards of civilization and institute a greater uniformity than is possible even in a primitive tribe. Phrased somewhat differently, the theme of equality is challenging that of equal opportunity to an extent and degree not previously known in this country.

There are those who insist that nuns must dress like other women and priests must marry like other men. Parents should listen to their children, who have much to teach them, say the more progressive child-development people. Beat the drum in the company band and prove you are one of the boys, one book on how to be a successful executive advises. Female radicals insist that all male retreats—clubs, bars, lodges—must go; some of them are hot-foot to kick the primordial female habit of striving to become sexually attractive.

Whereas in all previous epochs the life-style of those in the lower ranks aspired upward, aspiration now moves in either direction. Attempted emulation of one's so-called betters has until recently been constant, in dress, deportment, recreation—every sport, including baseball and roller-skating, was first introduced in this country by the "upper classes." Now, the pot, clothes, speech cadence and argot, the blatant sex and "cool," not of the Negro striver but the Negro who embodies "soul", are being adopted or at least being toyed with by white youngsters who range from declared hippies to those unwilling to compromise their careers to the point of disaster.

There is much more than youthful revolt involved. Behavior of this kind reflects rather than challenges a general and deepening guilt-cussants of delinquency insisted upon society's lines of exclusion, and affirm standards. There is, for example, the social problems literature in sociology. In it, "society" has always been at fault. But whereas until recently most discussants of delinquency insisted upon society's responsibility to so change the delinquent's circumstances that he might be led to accept the life of ordinary respectability, of law-abiding citizenship, the more fashionable line now is to condemn the life of ordinary respectability as a hypocritical sham against which delinquents justifiably rebel. And the recent Negro *volte-face* in favor of separatism was preceded by a white-liberal propaganda effort to redefine integration as a shoddy goal for a "racial subculture" that is on innumerable counts superior to a racist, chauvinistic, puritanical and uptight "white society."

Western civilization itself has been called villain. As Frank S. Meyer has pointed out, for several decades intellectuals have been expanding the doctrine that all is relative, that the worth of any belief or institution is in the eye of the beholder. Push-pin *is* as good as poetry, so that when Cornell University in the spring of 1968 was visited with violence, office-seizure, and a display of guns, Dean Stuart M. Brown, Jr. condoned these student activitites and condemed the claim of an economics professor—that Western civilization is superior to all others, which had angered members of the professor's class—as "a special and specifically obvious case of the racism which black people find throughout the white community."

What this and a multitude of similar incidents signify is a crisis of authority. The gut propositions that nothing is better than anything else (relativism) and no one is better than anyone else (equality) create noise in the streets but, far worse, they insidiously erode the will of men whose responsibility it is to order. direct, supervise, and lead. There is no intent to sound the alarm. Doubtless the retained faith of the American majority in their traditional values and in the continuity of the American experience will survive for some time. Nevertheless, the diminishing self-confidence of those charged with the responsibility of wielding authority is impressive.

Business leaders sound like defendants in court when they deny what they are and what they are trying to do, when they confusedly talk about social justice, about how they must become educators, improve the cultural life of the community, and the like. When they stammer like this they question their own authority, because providing goods and services at a profit needed for expansion and contingency planning is the only function that could conceivably justify their authority.

In a similar way, Marine officers commit slow role-suicide when they accede to "social conscience" and special treatment for the Negro recruits in such apparently minor but symbolically enormous matters as rebellious haircuts and salutes. Among academicians, however, can be found some who appear to grovel in abdication. Those administrators and professors who submit to student-dictated demands for "relevance" (that is, instantaneous and total dissent from whatever is) in course offerings or content, or who invite students to advise them on curricular goals, declare their own unfitness and admit they have no function to perform. If students arrive on campus already equipped to decide what and why they should study, is there any point in maintaining institutions of higher learning?

Authority as such, wielded by anyone anywhere, is in retreat. Contrary to liberal mythology, authority cannot be defended by the art of verbal persuasion alone, not even in the form of dialogue. In the final analysis, it cannot be proven that anyone *should* obey or respect anyone else, any more than it can be proven that someone *should* have more money than anyone else, or more talent. Differences of this kind can only be rejected out of hand, resented with bitter impotence, or accepted with or without reserve.

It is an unstable combination of inner compliance and outer restraint which motivates him who is under control of authority. At some indeterminate point in the rejection of authority, inner compliance lapses into anarchy and outer restraint is transformed into totalitarian force. The urge to equality, carried to its logical conclusion, first spreads anarchy and then calls forth reactions, for the child is left with no acceptable basis for obeying his parents, the soldier to obey his officer, the student to read what is assigned, the citizen to obey his country's laws, or even the employee to perform the task allotted to him.

Rhetoric and fact stand in uncertain relationship. The inflated rhetoric of egalitarianism, which attempts to justify the destruction of authority, condems all inequalities to a decibel level unheard in previous epochs. The fact that there is now less inequality in America than heretofore, the fact that there is less social inequality here than in, say, Great Britain, or France, or Germany, and a great deal less than in Soviet Russia, or India, or any of the so-called underdeveloped nations, does not affect the matter—a theme enlarged upon below.

The chief reason why there is less social inequality in America than anywhere else in the world is America's preeminence in capitalist development. Henry Ford was the chief—albeit totally unaware—revolutionary. He and a few others forsook the old "class-market" and instead sought to build and supply a "mass market." Then and only then did social class in any historic sense finally depart from America. The major shift to a "classless society" comes not with Marxist dogma but when the capitalist market is attuned to the big numbers. Privilege was a gulf when turn-of-the-century automobile manufacturers sold only luxury models. Privilege becomes a series of minute graduations when GM offers cars for every pocketbook, cars that are similarly styled.

How much democratic ideology merely rationalized the contraction of inequality within industrial society, and how much democratic ideology itself contributed to the emergence of a classless society, is open to debate. In either event, democratic ideology is somewhat contradictory, and on the basic issue of equality: all men are equal, and they should have an equal chance to excel. Equality, nevertheless, has consistently played second fiddle to equal opportunity. The majority gave, they continue to give, this notion their primary loyalty: men may not be literally equal, either in socio-economic condition or by genetic inheritance, but all men have or should have equal opportunity to succeed.

Factual inequality, in other words, contracted in company with maintained allegiance to the dominance-striving of our photo-hominid ancestry, defined for most as equal opportunity. To do what? To surpass one's competitors. Stated that baldly, and carried to conceivable limits, there could only be a few winners and a multitude of losers. Nothing of the kind ever happened, because the reference points of success for the majority were never very high. The reference was impoverished compatriots in the homeland for successive waves of immigrants, and they reached success by attaining average American standards of education, housing, speech, dress, and comportment. For most of their children and grandchildren success has meant more education than their parents acquired, and perhaps suburban living to accompany a better job. For most Americans of any vintage success has meant visibly moving up and out in terms of standards already established at a previous point in the life-cycle. Since rapid mobility has accompanied a constant rise of average standards, in a modest sense a majority have been enabled to succeed.

But just as individuals close open doors when they make a choice in marriage or career, so does some price have to be paid for whatever apparent gains a social system affords. Equal-opportunity ideology exacts a psychic toll on those who cannot succeed or who might otherwise remain reasonably contented. In an age of abundance, resentment can no longer be directed against a few who are rich, only against the many who have good jobs. In other words, the number of people with whom the unsuccessful person compares himself to his own disadvantage constantly increases.

"It is rather discouraging to consider the possibility," says Jackson Tody, "that the expansion of educational and occupational opportunities in the contemporary world may *increase* the feeling of deprivation in the also-rans." According to Helmut Schoeck: "Only the existence of unequal external opportunities makes it possible for the unsuccessful individual to live with himself," The failure can no longer blame bad luck or "the system" when the pressure he feels is not to remain where he is but to accept unwanted free job training.

But if equal opportunity fosters discontent among a minority, the drive to literal equality creates far worse and more discontent for minority and majority alike. Consider, for example, current attempts to provide "compensatory justice" to Negroes for injuries done to their ancestors by whites whose descendants are themselves a minority. Negroes can be made equal by *lowering* standards for them alone in education and on the job? This is an elusive and impossible goal. Instant achievement cannot be conferred by this or any other means. Efforts to supply it can only lead to a redefinition of social inferiority in terms of charity and protection. To inform another person, even indirectly, that he is not capable of meeting standards of dress, punctuality, manner and performance that are applied to others is to deny his humanity. Lowered standards only perpetuate racism with a condescension that supplied the Black Panthers with much of their fury.

Curiously enough, the drive to literal equality is perceived as a greater threat by those who are marginally well-off than by those who are wealthy—among whom can be found many of the publicists of equality, who presumably believe they will be left unscathed. But the discontent of the former is growing, even though it remains virtually unremarked in the media and the college. It will inevitably continue to grow, because demands that everyone should be treated alike violate the most basic of all subjective standards of justice: he who by his own effort measures up to a declared standard should be rewarded, while he who fails to do so should be penalized or at least go unrewarded. This is how children in every known society are socialized within the family, and prepared for and brought into the larger community outside the home.

Those who have criticized various schemes to guarantee everyone, whether he works or not, a fixed level of comfortable living with tax money miss the point when they argue that more people than ever would remain voluntarily unemployed. Of course they would, but that condition alone would not have disastrous consequences. People on welfare can already reject unwanted jobs, and thousands of women are imported every year from Mexico, Canada, and Ireland for domestic service. But the protective measures which insulate the social worker's charges from distasteful labor are not trumpeted in the headlines, and most taxpayers remain ignorant of them.

The guaranteed annual income is a different matter. Everyone would know exactly what the provisions are; they could not be hidden from public view. And it would be an experiment unique in history: to reward equally those who meet no generally accepted standard of striving or accomplishment and those who must do those repetitive or distasteful or dirty jobs which are essential for the preservation of social life—washing dishes, sweeping floors, collecting garbage, attending hospital wards, maintaining sewerage lines, quarding prisoners, pumping gasoline, and the like. Counter-resentment would rise; there would be steady recruitment into embittered idleness of those who at one time boasted they they were poor but honest, who said they might not be rich but owed no man, who kept their heads high because they had never accepted, or had to accept, public charity. Meanwhile, those essential but bottom-drawer jobs would go unfilled.

Actually, the above sequence of events is not likely to occur. This one is more probable: at some point a reversal of policy would have to be started, and social reinforcement of the desire to be honest and non-indigent supplied by opening instead of closing the gap between those near the bottom and those at the bottom. But the price that would have to be paid in dislocation and disruption before that could be slowly and painfully done would come high.

Why is equality demanded and all inequalities denounced, if not by everyone then by enough people to rip tears in the fabric of order? To ask the question is to take a stand, and those who do ordinarily point to what they believe is a breakdown of controls. The family, it is said, has become child-centered and permissive, depriving children of the psychic freedom from want on impulse that only a set of principles can bestow. The courts are blamed for erasing distinctions between literature and obscenity, individual legal rights and special privileges for minorities, innocence and guilt, and for themselves raising questions about the right to punish, the right to affirm even that unequal treatment.

Religion, the argument continues, no longer guides and restricts. The loss of religious faith, according to British sociologist John Plamenatz, has removed Providence as the ultimate arbiter of that arrangement whereby some men are placed higher than others, in which "the most lowly placed in that order may find it easy to resign themselves to it and may acquire deep loyalties inside it, if not exactly to it." When instead, that arrangement is held to be something men may alter for their own good and benefit of others, then it loses legitimacy. All differences in rank and income must be justified, and repeated efforts to do so become futile. "It comes to be widely held that, if (inequality) cannot be justified, it ought to be abolished."

The breakdown of controls, in turn, is customarily traced to two emergent conditions of the modern era. The first is affluence. A failure to strive, even a disinclination to work, is no longer penalized. On one hand are welfare applicants who are not required to take any job that is beneath their subsidized dignity. On the other are non-working retired students whose parents supply money for pot, pills, beads, and expensive cars that head for those periodic rock festivals, where guttersnipe millionaires sing songs of protest againt materialism.

With such conditions—which may be somewhat less permanent than many observers believe—only highly motivated individuals can reasonably be expected to exert more than marginal effort. Miraculously enough, most people continue to be so motivated, a fact which prompts the suspicion that striving may be the natural state of the human animal. But it has been claimed that the pressure of an economy of scarcity, that requires the work of all hands, is no longer exerted. In consequence, work for an increasing proportion of those who continue to strive—as always for private ends of self-respect—is less buttressed by the knowledge that each man's contribution is essential to the general welfare. Modern affluence offers a temptation to waver between idleness and purposeful effort, and thereby weakens for many that application in work which Freud said is necessary to bind men to reality.

The above view has merit, but more as reasonable inference than demonstration. While some categories of persons work much less than heretofore, others work much more. A general state of affluence, then, can have no uniform effect upon motivation.

A dual category of parasites has emerged, one near the top and the other at the bottom of the income scale, of a size that dwarfs any "leisure class" that ever existed when social classes were real. The toleration, indeed glorification, of these parasites has done more to discredit the notion that work is needed than any demonstrable fact. The obfuscation that is rife among us was illustrated by a well-known scholar's recent prediction that the labor force in a few years will be drastically reduced while the level of living continues to rise. In a separate section of his report he predicted that moonlighting will increase by 50% in 5 years. In other words, in effect he is saying that we can well afford more parasites because some people are elected to work longer and harder.

Some of those elected are highly-competent technicians the demand for whose work far exceeds foreseeable supply. Others are business executives and professionals. "Class structure" has been turned upside down. For centuries those at the top of the heap worked less than others, if indeed they worked at all. But now, according to the detailed researches of Harold L. Wilensky, professionals and especially business executives work longer and harder than any other category in the division of labor, and he predicts they will have even less opportunity to enjoy leisure time in the immediate future. And no one, not even Professor Wilensky, has tried to explain why those who are victims of this "social injustice" should continue to submit. In any event, the present gross imbalance between effort and reward could lead to a breakdown of controls not envisioned in the usual discussions of affluence and its effects.

The second emergent condition most often associated with the breakdown of controls is the unprecedented tempo of change in the modern era. Peter Gay makes much of the German "son's revolt against the father" in the post-World War 1 decade. German youth, he says, lived in a world whose values and even assumptions departed from those of their parents. Some American social psychologists have raised the ante, insisting that "cohort gap" must replace generation gap, because the values and assumptions of youngsters separated by 5 - 7 years are now as disparate as they were between parents and all adolescents a decade ago.

The present rate of change is so rapid that middle-aged people, looking back to their own youth and what people believed and thought they knew at that time, feel the ground shifting beneath their feet in a prevalence of the strange and the temporary. Many of them are not sure any longer what they believe in, or whether what they cling to is, in the pervasive cliche, any longer relevant. A sense of bafflement erodes their faith in what they have accomplished, even in what they are. The sheer noise of disputation around them, of claim and counter-claim, can make them uneasy about their own or anyone else's authority.

But again, as in the case of affluence, there is no simple cause - effect relationship. A very large majority of middle-aged citizens manage to stay on a fairly even keel. They don't abdicate to their own children. They try to obey even those new laws they cannot understand. They don't swap wives in the suburbs, no matter how "adult" the cinematic treatment of suburban sex. They work hard, remain patriotic enough to worry about what is being done to their country, and remain religious enough to ignore or misapprehend the whipper-snapper young clergymen who snidely preach atheism.

Much the same can be said about their children, albeit that majority is somewhat smaller and their general commitment to continuity with the past somewhat less. Amidst hedonic and anarchic blandishments there is continued allegiance to the Protestant Ethic. Watered down and compromised it may be, but most American youngsters are still willing to work hard, in school or out; they welcome the continuity of forming another family in their turn, and reach for self-validation in a career.

Despite affluence and perhaps chaotic change, only a minority albeit in the perspective of history a large one, by deed and belief seek to smash whatever is or, synonymously, to reject all inequalities. Only a minority renounce the opportunity to strive, and simultaneously seek the humiliation and destruction—at a conscious or unconscious level—of their own country. Be reminded also that they are either the special targets or special audiences of the professional wreckers operating out of the media, Congress, the academy, and the pulpit.

But why the minority? Why have they reacted to a total social setting in ways the majority have not? The answer cannot be found in emergent conditions and the impairment of controls alone, because history discloses gnostic heresies in every century. There were destructive chiliastic uprisings by, it is true, very small minorities, in the 11th, 12th, and 13th centuries, times conventionally associated with fixed standards of belief and unassailable hierarchical arrangement.

Perhaps the modern era has not so much caused as it has released disaffection and alienation on a larger scale than in the few preceding decades. And if that is so, the scene before us might be at least partly explained in terms of a constant in human nature which varies in intensity from one individual to another as does striving for dominance, another constant in human nature. The hypothesis offered is this: the human propensity to create and maintain hierarchy is accompanied by a wish to see hierarchy destroyed. A majority of shifting size are tempted but quell the impulse. A minority of shifting size succumb. In this light, the salient difference between our time and the immediate past is the size of the minority.

There is a persistent error in social thought: if facts and changes in facts can be traced, then the attitudes which men adopt to their world can be explained, along with reorientations of thought and behavior. Actually, the relationship between social conditions and behavior is a tenuous one; it does exist, but in no simple or direct way. The reason why separates man from all other animals, including the primates. Alone possessing language, man acts and reacts not in terms of facts or things-as-they-are or even things-as-they-have-become. He acts and reacts to the *meaning* which those facts have for him, and such meaning cannot be directly ascertained in any study of either persisting or changing fact.

The "facts" man finds in his social world are mainly derived from pictures in his mind. For example, the staff of the *New Republic* are totally committed to John Galbraith's article of faith that unlimited spending in the public sector (tax money) will open the gate to a shining, if earthly, city. They warn that economic depression threatens because of the *fact* that the federal government is not taxing and spending enough money. Other writers have warned that depression threatens because of the *fact* that government taxing and spending have assumed monstrous proportions.

Ten years ago some of our most influential opinion makers worried about the problems of affluence. Today these same gentlemen warn about the seriousness of American poverty, at a time when poverty is infinitesimal by any conceivable standard or comparison, when Negroes, for example, enjoy a higher median annual income than the population of Canada. Dissent was never more fashionable nor meticulously protected by law, but the National Commission on the causes and Prevention of Violence frets that "the existing remedies to aggrieved persons" to speak, assemble, and protest, "are not adequate." Does fact have anything at all to do with the current inflation of impassioned rhetoric? A bewildered and frightened college dean, desperately and ineffectively trying to please everyone is, of course, in some academic circles a fascist - racist bastard.

Changes of meaning result from rhetorical manipulations of the passsions and not from facts, not even changing facts. In turn, much of that manipulation stems from protest, not against this or that oftentimes relatively trivial deprivation or claimed injustice, but against the human condition.

Whatever sense of selfhood or ego other animals, including primates, may possess, must be rudimentary indeed, for they are locked into an eternal present. Only man, because of language, can in imagination both separate himself from and associate with others, far and near, in past and future as well as present. His ego isolates him from all others of his own kind; at the same time in imagination he associates himself from the self outward, in a time-expanded identification with the fate of nations, with history and the universe.

But his own time, to him, is that in which *the* critical events are taking place, the binding decisions are being formed. Every generation believes that the future will never forget what was done here and now. In Jakob Burckhardt's words: "Everyone regards all times as fulfilled in his own, and cannot see his own as one of many passing waves." As a corollary, each man at some level of consciousness either regards himself as irreplaceably important in his own time or bitterly resents the evidence that he is not. And Camus insisted that every man harbors a secret grudge against the ring of contesting wills which prevent him from becoming all that he could have been if those others could have been trampled down.

Uniquely human envy and resentment are accompanied by a unique foreknowledge of personal oblivion, and in an ultimate sense man cannot reconcile himself to his own death. He may deny it with a doctrine of afterlife. He may seek to blunt the finality of it with Arcadian dreams of a perfect past or utopian hopes for a perfected future. But he knows that *he* cannot go back in time or live in that time to come. That is why eschatology, myths of the Final Days, so powerfully grip imagination, whether Armageddon, Götterdämmerung, or nuclear holocaust. If in this supremely important time this supremely important person must die, there should be vindication. If with ego's death all will end, then let all come to an end. This secret wish is the ultimate expression of the will to equality.

Man shares with the other primates a propensity to maintain order by forming hierarchies of status, and in somewhat less degree shares devotion to equality of opportunity. But in developed human nature there is a unique counter-propensity, to contest hierarchy and even welcome disaster and destruction. This urge, impulse, call it what you will, as the above discussion indicates is not synonymous with aggression, striving, or competition, which are all life-affirming. But it can wear such masks. Those hippie communes, for example, ostensibly devoted to the creation of a new way of life, spend what little time can be spared from self-indulgence on plans to survive the destruction of the United States and most of its citizens, a prospect which leaves the expectant vindicated remnant somewhat less than saddened. Those militant females who deny their own sex role and those youngsters who ape the life styles of their social inferiors with much less intensity manifest the same urge.

This revolt against hierarchy, this drive to equality, is not necessarily disclosed in every effort to remove a particular hierarchy. The American Revolution sought only to replace foreign with native rule, and those who seek to equate that movement with what is happening in the streets and on on our campuses today should be reminded that the colonists charged the British government with having violated established law and practice. Even our home-grown Communists of the thirties sought to replace one hierarchical arrangement with another. What has been unleashed in the last few years is something different even from that: a widespread determination to smash order and status themselves, a mindless yearning for chaos. It is useless to ask hippies, Black Panthers, college militants, and Weathermen what they want. Only a few of them have the insight to recognize and the courage to admit that what they seek is destruction.

Revolt against the human condition is not to be assuaged with social reforms, because rebellion against the common fate of death and limited importance in the world is a matter of choice and not of social necessity. If the demoniacal element in human nature is a constant perhaps it can only be contained, in self and others, by those men in whom the counter-propensity for order is predominant. If existential *Angst* promotes a human readiness for breakdown and wreckage, then it is not amenable to control by those two primary fallacies bequeathed to us by Rousseau which dominate present-day ideology and intervention. One, that men become better citizens when they are all equal. Two, that men are born good and become bad only because of evil social institutions.

The evidence is against him and his legion of intellectual descendants. Human social life is possible only with authority, legitimization of hierarchical inequality, and the application of external constraint maintained by institutional rules of the inclusive group. Further, if the blind urge to destroy order lurks in developed human nature, and accompanies the protohominid propensity to maintain order, then a thorough examination of current mythology is surely indicated, most notably that criminality, viciousness, and anarchy result only from the failure of "society" to abolish inequality, erase poverty, and heed the "higher conscience" of those who choose to disobey laws they don't like or find inconvenient.

The National Commission on the Causes and Prevention of Violence ignored Tocqueville's warning: "The hatred which men bear to privilege increases in proportion as privileges become fewer and less considerable." Nor could they have paid much attention to one of their own members, Eric Hoffer, who has consistently denounced all efforts to soften the standards of equal opportunity by supplying unearned "privileges." Anyway, the Commission has urged that $20 billion of additional tax money be spent each year on "general welfare" in order to reduce "a rising tide of individual and group violence." It is the failure to *provide* the poor with a better life which "continues to be prescription for violence."

The mind boggles, the heart sinks. Does it take several of the best minds in the country several months of study and thought to concoct snake-oil such as this? We must bribe one segment of the population with more unearned privileges, at the expense of those who have earned theirs, in order to be physically safe in our own country. The question of ethics aside, the ploy would not work. And since violence among the poor was by comparison minimal during the Great Depression, when by comparison "general welfare" was also minimal, is it possible that the correct formula has been inverted?

Instead of bribery, would self-righteous repression in the control of violence be more efficacious? Probably not, at least not in the total context of the present time. Such a shift in approach would not as yet find enough support in common sentiment, which is angry enough but lacks cohesion because authority, especially moral authority, has been for too long steadily eroded by too many intellectual, religious, and even political leaders.

A strange situation has emerged. A majority of Americans are reasonably content with what is; their allegiance to the life and ideal of equal opportunity remains virtually undiminished. But many and possibly most of their leaders have abandoned them. Intoxicated with Rousseau's legacy, and determined at whatever cost to enforce their deviant ideas with a shrill sound of pure intention, in answer to the demoniacal element in themselves these leaders release it in favored others. Meanwhile, through their continuous and virtually unchallenged appeals to "reason," they spread confusion and apathy among the majority. Our time is desperately in need of dissent.

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SPONTANEOUS ORDER AND THE COORDINATION OF ECONOMIC ACTIVITIES*

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This paper is an essay on the coordination of economic activities. It is exploratory and speculative, connecting arguments that I have made in several other places. The essay is an attempt to give a coherent picture of some of the theoretical and practical problems facing economists, as well as society in general. As this paper is being written for a conference on Austrian economics, I propose to deal with questions specifically from the viewpoint of Austrian economics. It is not that I propose to defend the proposition that economists of this school possess a uniquely correct perspective of the issues, but merely that they have much to say on the particular questions with which I will deal. I trust that my references to economists not normally considered to be members of the Austrian School will demonstrate the universality of the problems discussed here.

Those economists who view a system of free exchange — Adam Smith's "obvious and simple system of natural liberty[1]" — as the solution of the coordination problem in economics face intellectual challenges from at least four sources: first, the continuing challenge of the Keynesian legacy; second, the challenge from what James Buchanan has termed the "modern Ricardians"; third, the challenge from the new movement for national planning; and finally, the challenge from certain economists in the Austrian school.

In previous papers, I have dealt with the Austrian Analysis of monetary theory (or macroeconomics) as it is concerned with the coordination of economic activities. Accordingly, I will begin with this general problem.

*The original version of this paper was presented at a conference on Austrian economics at Windsor Castle, August 1976, and will be published in the "Studies in Economic Theory" series of Sheed, Andrews and McMeel, Inc.

THE KEYNESIAN LEGACY

It has become clear in recent years that Keynes' *General Theory* is a very confused work, so much that it is virtually an ink-blot test for economists: an economist's perception of its contents tells more about the beliefs of the reader than the contents of that book.[2] Indeed, Keynes' sympathetic critics are compelled to point out these confusions in their attempts to argue that he made a significant contribution to our understanding of the economic system. The best example of this is Axel Leijonhufvud's *On Keynesian Economics and the Economics of Keynes.*[3] We are told there that Keynes had important insights into coordination failures in market systems. Specifically, Leijonhufvud's Keynes argued that banking and financial systems can operate so as to impede rather than to facilitate the adjustment to a change in the equilibrium rate of interest. Securities markets are incapable of moving from a higher to a lower equilibrium rate of interest, without attendant fluctuations in income and employment. This is true whether the assumed disturbance consists of a downward shift in the marginal efficiency of investment (Keynes' marginal efficiency of capital), or an increase in the savings schedule (a decreased marginal propensity to consume out of current income). The existence of bearish speculators in securities markets impedes smooth adjustment of those markets. Keynes' bears do this by speculating against any rise in the prices of long-lived assets, real or financial.[4] Keynesian bears speculate on the basis of the historical perception that they possess of a "normal" long run rate of interest. If this normal long-rate could be taken as summarizing the real forces determining the equilibrium rate of interest, then it is quite reasonable, from a profit-maximizing viewpoint, for speculators to treat deviations from the rate as temporary fluctuations.[5] Indeed, Keynes' speculators behave precisely the way textbook examples suggest, in that they act so as to hasten the return to the *perceived* equilibrium position (though this effect is not part of their intention, of course). But in this instance, speculative activity, following a guide that normally proves reliable, proves to be disequilibrating in its effects. Speculators are misled into identifying as but a transitory fluctuation what in fact is the consequence of a shift in parameters.

In microtheory it is customary to point out that speculators who misidentify an equilibrium position will suffer capital losses, and that, in any case, market forces will restore equilibrium. But Keynes raised an important issue: bearish speculators, in exhibiting liquidity preference, can initiate deflationary pressures.[6] Unless we assume that wage and price changes occur *infinitely* fast, then price deflation will be accompanied by quantity-adjustments.[7] In effect, the resulting speculative losses become socialized. To put a Keynesian proposition in Hayekian terms, the unintended consequences of a speculative search for liquidity generates falling income and general illiquidity. If one adopts the position — as do most Austrians — that the market *process* is a continuing search for opportunities, one cannot dismiss out of hand the possibility that speculation of the Keynesian variety could inhibit the equilibrating market forces. And unless one adopts the view that prices are always correct, which no Austrian would do, then one must confront this Keynesian information problem.

Several points need to be made here. I have been talking of "Leijonhufvud's Keynes", because of the problematical nature of *The General Theory.* Yet my paraphrase of Leijonhufvud's interpretation is a fairly straight-forward argument about discoordinating market processes. The obvious question that comes to mind in this context is why Keynes didn't say all this explicitly and simply if this is what he meant? The thesis, as I have presented it, can obviously be put very succinctly. What makes Leijonhufvud's presentation of it so difficult is the web of confusion sown by Keynes.

In order to show that his interpretation has captured the authentic Keynes, Leijonhufvud not only must do battle with conflicting interpretations, but must deal with Keynes' own imprecision and confusion. The clearest example of these problems occurs in Leijonhufvud's discussion of Keynes' views on capital. Before examining this discussion, however, one must consider the intellectual background to the treatment of capital questions in *The General Theory.*

Hayek was quite critical of Keynes' earlier book, the *Treatise on Money,* when he reviewed that work. The general tenor of this criticism is that Keynes, at the time he wrote that book, was largely ignorant of capital theory. Hayek recognized that Keynes was presenting a neo-Wicksellian theory, but without the necessary theoretical foundations.[8] And he observed that:

> It is *a priori* unlikely that an attempt to utilise the conclusions drawn from a certain theory without accepting that theory itself should be successful. But, in the case of an author of Mr. Heynes' intellectual calibre, the attempt produces results which are truly remarkable.[9]

In an amazing piece of candor, Keynes all but admitted the legitimacy of Hayek's criticism; after defending himself by observing that there was no "satisfactory theory" of capital in "completed form", Keynes stated:

> Nevertheless, substantially I concede Dr. Hayek's point. I agree with him that a clear account of the factors determining the natural rate of interest ought to have a place in a completed *Treatise on Money,* and that it is lacking in mine: and I can only plead that I had much to say for which such a theory is not required and that my own ideas about it were still too much in embryo to deserve publication. Later on, I will endeavor to make good this deficiency.[10]

Did Keynes ever "make good this deficiency"? I do not believe so, and offer the following observations in support of this judgment. Much of the confusion surrounding the nature of Keynes' message can be accounted for if one accepts the thesis that Keynes remained largely ignorant of capital theory. He had difficulty, then, in presenting his message because he did not possess the requisite technical knowledge. Of course, one could also infer that Keynes was not sure of the message that he wished to present. There is evidence for this interpretation in the recent observation of one of his close associates at Cambridge, Joan Robinson, who noted that certain of Keynes' putative followers "sometimes had some trouble in getting Maynard to see what the point of his revolution really was".[11]

But I would offer as a final judgment of Keynes the observation of his recent interpreter, Axel Leijonhufvud. By far the most difficult chapter of the latter's book is the fourth, "The General Theory of Liquidity Preference", in which both the state of capital theory in the thirties and Keynes' own views on the subject are presented. Of this complexity, Leijonhufvud remarks: "This chapter will be a lengthy affair, partly because of the intrinsic difficulty of capital theory, partly because Keynes did not work out his ideas on the subject in much detail so that we are left with only what amounts to an unfinished sketch".[12] In short, Keynes never made up the self-admitted deficiency of the *Treatise*. But it is only by having thus demonstrated Keynes' lack of knowledge and clarity that Leijonhufvud can make it at all plausible that Keynes had a comparatively simple point to make (i.e., stickiness of interest rates), though this point is not the one commonly attributed to him (i.e., stickiness of money wage rates).

There are several approaches that one can take to Keynes' challenge. Conceptual errors abound in *The General Theory*; and I have suggested that in the area of capital theory, Keynes is quite confused. One can fairly easily engage in piecemeal criticism of Keynes' ideas. I do not believe that the Keynesian system can stand up to such a criticism. But I am not sure that this is a fruitful approach, though I myself have adopted it on previous occasions.[13] The reasons are several-fold. First, no one, I believe, can get beyond the exegetical problem — I refer the reader again to my ink-blot analogy. No matter which Keynes one criticizes, a new Keynes is proffered in its stead. More to the point, one must consider the possibility that the most interesting recent interpretation bears scant resemblance to Keynes' ideas. Yeager has argued, for instance, that Leijonhufvud and Clower both seem prepared to credit Keynes with their own, original contribution.[14] Perhaps, then, Keynes is the wrong target of any criticism.

Nonetheless, the Keynesian *debate* does raise important theoretical issues that Austrians must confront, regardless of who is adjudged the author of particular views. And I believe that there is one unifying theme running through most, if not all versions of Keynesian economics: the self-correcting forces of the market economy cannot be relied upon to maintain full-employment and reasonable price stability. In its most extreme version, this criticism might even deny the existence of self-correcting market forces. It is to the issue of the strength of these market forces that Austrians should address themselves, for it is now becoming increasingly accepted that macro-economics is in fact concerned with the coordination of economic activities. Leijonhufvud has stated the problem as follows:

> ...The central issue in macroeconomic theory is — once again — the extent to which the economy, or at least its market sectors, may properly be regarded as a self-regulating system...How well or badly, do its "automatic" mechanisms perform?[15]

Before continuing, it would be well to consider this latter issue in detail.

THE PRINCIPLE OF SPONTANEOUS ORDER

The principle of spontaneous order — or of "undesigned order", as it might more properly be called — can be viewed as the first principle of economics. Indeed, James Buchanan has recently gone so far as to suggest that it is the *only* principle of economics. The principle is, in any case, a cornerstone of modern economics, whether we trace modern (i.e., post-mercantilist) economics back to Adam Smith and the other Scottish moral philosophers, or to the Physiocrats. With this principle, scholars for the first time could see economic phenomena as interdependent events. Indeed, this principle made it possible to reason systematically and coherently about economic phenomena. Much of nineteenth century economics can be seen as consisting of developments of this principle (along with minority criticisms of the principle and the systems of thought deduced therefrom).

On the other hand, most of twentieth century economics has consisted of reactions against systems in which this principle plays a central role. In this, Keynesian economics is but one among a family of theories that deny the existence of a spontaneous or undesigned market order in which plans are coordinated. The reaction has been so complete, that what was taken by earlier economists to be an empirical law — the existence of a spontaneous market order — is now frequently viewed as the product of ideological bias or prejudice. If anything, modern economic discussions presuppose the absence of the very order whose existence was the cornerstone of much of nineteenth century economics.[16]

It is apparent now that the principle was not firmly enough established in economics to withstand the criticisms that were levied against it. Yet the question of the existence of a spontaneously-generated order remains the central question of economics — and of social theory in general — even though it is seldom recognized as such. Theories of the instability of investment, and of saving, and of aggregate demand, are all variants of the general proposition that the economy lacks strong forces leading to an undesigned order. These are not simply disputes of technical economics, narrowly defined, though they too long have been treated as such. The question of the necessary amount of governmental stabilization policy will not be decided by running yet another money-demand equation through a computer. Nonetheless, it is imperative that the question be addressed directly once again.[17]

As intellectual descendants of Carl Menger, most Austrian economists have defended the proposition that spontaneous market forces are capable of producing an overall order in society. Hayek, for one, is well-known for his emphasis on the role of the nonpurposive social organizations in this process.[18] Indeed, the persistence of members of this school in their views in the face of the contrary opinion of much of the profession has contributed to their isolation from the rest of the profession. In this sense, and alone among the neoclassical schools, the Austrians can today lay claim to being the inheritors of the Smithian system. In this, the bicentenary of the publication of *The Wealth of Nations,* it would be well for Austrian economists to seize the opportunity to re-establish the importance of the principle of spontaneous order — an order that, though designed by no one, emerges from the individual and independent planning of market transactors.

THE NEW RICARDIANS[19]

There is yet another tradition in the history of economics, distinct from both the Austrian and Smithian traditions, and from those that are overtly hostile to these traditions. It is a tradition epitomized by David Ricardo's general approach to economic questions. In the Ricardian tradition, attention is focused on the long run, in which full adjustment to all disturbances has occurred. Periods of transition are abstracted from.[20] It would be anachronistic to credit Ricardo with a theory of perfect information, but he wrote as though the labourers, capitalists and rentiers of his system had full access to future events. The difference between the Smithian and Ricardian traditions is a subtle, though important one; and it separates theorists even today.

In Smith's world, changes are constantly occurring, and adaptations to these changes are never complete. These changes may be of comparatively simple variety, such as variations in the corn harvest from year to year (with attendant effects on real wage rates).[21] More importantly, Smith was concerned with the continuous process of market adaptation to invention and further extensions of the division of labor. Changes in institutions and the legal structure are of prime concern.[22] It is not, of course, that Smith had nothing to say about the long run. His value theory is a long run theory, though I find it one of the least developed parts of his system.[23] Nonetheless, the emphasis in *The Wealth of Nations* is on change. Moreover, Smith's actors suffer various illusions and misunderstandings about future events, and, indeed, their own self-interest. None of this would make sense in a Ricardian world.

Whether it is a question of monetary economics, or of fiscal policy, Ricardo generally treats all disturbances as though they were fully and completely anticipated.[24] In the

Ricardian world, then, the problem of coordination disappears. It is not that Ricardo denied the principle of spontaneous order. Rather he did not treat the emergence of coordinated behaviour on the market as a problem. He in effect *assumed* that economic behavior will be coordinated. Most importantly, and unlike Smith, Ricardo generally ignored the question of what institutional arrangements are necessary for the emergence of that order upon which the soundness of his arguments depends.

The institutional setting and the allocation mechanism matter in economics precisely because behavior in a changing world is not automatically coordinated. Laws and institutions have a significant impact on human behavior precisely because some facilitate and some inhibit the flow of information that is necessary for adaptation in a changing world. This realization is certainly contained in *The Wealth of Nations* — Smith's emphasis on the importance of these matters suffuses that work. Not so with Ricardo's *Principles.*

Professor Lachmann has recently reminded us that the problem of economic coordination is intimately involved with the twin problems of acquisition and diffusion of knowledge among transactors. In dealing with the characteristic assumption that the state of knowledge is among the data of the system, he queries:

> Do we assume that all market actors know all the tastes and resources in all markets in which they, actually or potentially, do or might operate? But if so, equilibrium should at once be attained in all markets. If we were to make this assumption there could be no disequilibrium, no dealings at "false prices". Walras' auctioneer would become superfluous. If, on the other hand, we do not make it, how do we delimit the extent of each actor's knowledge at each point of time, and how do we deal with the flow of knowledge between actors over time?[25]

All this talk about the importance of information may seem prosaic to economists at this point. But the radical implications of imperfect knowledge have simply not been generally absorbed in economic theory. For, *inter alia,* imperfection of knowledge means that prices do not necessarily coordinate economic behavior, as those prices are influenced by the inconsistent expectations on the basis of "false" price signals. To justify one's faith in the coordinating function of markets, one cannot simply assume that prices are coordinating, or at their (*ex ante*) equilibrium level. Rather, one must be concerned with the institutional environment of economic systems, and the appropriateness of these institutions for the emergence of a spontaneous market order. One must be concerned, then, with specifying the situations in which prices will coordinate, and those situations in which prices will not coordinate economic activity. By his attention to the long run, in which, *ex hypothesi,* all such problems disappear because full adjustment to all changes has occurred, Ricardo (and his followers) ignored these difficulties.

The problem of economic coordination is a theoretical and practical issue not merely because decision-making is decentralized, though this is an important aspect of the problem. Of even more importance is the fact that we live in a world of constant change. Were there decentralized decision-making, but an unchanging environment, it might be reasonable to suppose that economic activity could be coordinated under a wide variety of institutional and allocational arrangements. Learning would occur due to the repetition of events, with adjustments made as past errors were revealed.[26] A price system and appropriate market institutions are of practical significance precisely because of the need to register the effects of continuous changes in the data, changes which are given to no one in their entirety. On the other hand, it is doubtful whether money, prices or the market system would exist in the stationary state. Those who ignore this aspect of imperfect information are caught in the dilemma of dealing with phenomena, most of which would not exist in the world as they assume that world to exist — a world of perfectly coordinated plans.[27]

Ricardo and his epigones thus obscured the basic questions of social order that Smith had raised. They shifted the emphasis away from these questions to the theorems and lemmas of value theory. Their legacy is still with us today. Walras and Lausanne School introduced the concept of *general* equilibrium into economics. But in other respects the Walrasian system is quite similar to the Ricardian: both are perfectly coordinated systems. By the sheer logic of these systems, neither is obviously concerned with the coordination of economic activities — this coordination is implicitly assumed to take place. In such systems laws and institutions cannot matter. Monetary disturbances can have no significant effects — for the transition periods in which money clearly matters are de-emphasized or ignored in the Ricardian system.[28] In such systems, the market would not be viewed as a process in which continual adjustment to continual change occurs, but a state of affairs in which this process was at an end.

The Chicago School can be fairly described as the modern Ricardians. In Kirzner's terminology, the transactors in the Chicago world are nothing but Robbinsian maximizers.[29] Chicago economists are Ricardian in their approach to questions of tax and expenditure policy and monetary policy, to cite two examples previously mentioned for Ricardo. The Ricardian bent of the Chicago School is important to the Austrian School for at least two reasons.

First, the time has passed when members of the Chicago School were articulate, but minority members of the profession. Increasingly, economic discussions and debates are influenced by their approach. Second, on issues involving coordination questions, their Ricardian leanings *re-enforce* the Walrasian approach of the dominant mathematical, general equilibrium theorists. This is an important point because economists are beginning to recognize the distinctiveness of the Marshallian approach (*vis à vis* the Walrasian approach) of Chicago School economists. And the differences between Chicago School economists and the rest of the profession are important for a wide variety of issues, such as the role of empirical research, partial vs. general equilibrium analysis, etc. But as regards the coordination of economic activities, the new Ricardians and the neo-Walrasians are more of one mind. They tend to take for granted that markets coordinate economic activities. By doing so, they ignore the complex questions of economic coordination, upon the solution of which depends the degree of economic coordination. This approach is objectionable because of the conclusions it engenders when markets demonstrably are not coordinating economic activity. The "market failure" mentality is an effect of this approach.[30] "The market system" is adjudged a failure in such cases, with scant recognition that " the market" is a metaphor for a complex of interrelationships and institutions, any one of which may be the source of the problem. That members of the Chicago School are generally more sanguine about the efficacy of this system hardly mitigates against the methodological point being made here.

Austrian economists and other adherents to the principle of spontaneous order will receive little support, and should generally expect overt hostility from the Chicago School on a wide range of economic questions.[31] Austrian economists tend to view most economic questions as issues involving the principle of spontaneous order. Accordingly, they take characteristic positions on these questions. Two of the areas where disagreement between the two schools is particularly intense are monetary and capital theory. Quite apart from their differences over the determination of the *equilibrium* values of interest rates, the two schools are sharply divided over the approach to questions of capital and interest theory, as well as those of monetary theory. Being Ricardians, members of the Chicago School naturally keep questions of monetary theory and capital theory quite distinct, since these are distinct problems in long run equilibrium analysis. As did Ricardo, they treat deviations from the equilibrium rate of interest as temporary fluctuations. The transitional periods in which monetary disturbances influence the accumulation of capital and the level of rate of interest are typically ignored or at least de-emphasized.

On the other hand, many of the twentieth century members of the Austrian School have dealt with the interface between monetary and capital theory. Mises and Hayek were most persistent in their analysis of the interrelation between monetary and capital questions, precisely because of their interest in adjustment problems. Hayek, for instance, has been consistent in treating economic fluctuations as manifestations of economic discoordination, brought on by monetary disturbances.[32] For Hayek, monetary disturbances change entrepreneurial expectations, and lead to capital accumulation that, *ex post,* is revealed to have been malinvestment. These malinvestments cause real scarcities, whose existence become manifest in subsequent price changes. The price changes compel entrepreneurs — because of the capital losses that they are then incurring — to revise their investment plans. It is in this sense that modern Austrians view cyclical expansions brought about by monetary and credit inflation as self-reversing and inherently unstable.[33]

Hayek and Mises thus deal with phenomena virtually ignored by monetary theorists of the Chicago School — the transition period between a monetary disturbance and complete adjustment to its effects.[34] To the extent that Professor Friedman, for instance, deals with the transition period, it is only in terms of one, comparatively narrow problem — anticipation of future price levels.[35] As a practical matter, monetarists generally view inflation as synchronized inflation, with all prices rising *pari passu.* For Hayek and Mises, synchronized inflation is a fantasy, so long as monetary disturbances impinge at specific points.[36] And full adjustment to inflation would be all but inconceivable, as it would involve each actor's anticipating correctly the precise changes in each relative price that will occur in each future period, due to the assumed monetary disturbance.[37]

Once again, the Ricardian approach to monetary questions blinds its users to the issues considered paramount by the Austrians. In so doing, this approach inhibits an understanding of important issues confronting market economists. For the Ricardian — quantity theory approach is one in which prices continue their coordinating function even in an inflation. Yet, the point at issue is whether spontaneous market forces operate as usual in an inflation. If monetary disturbances not only generate pure price inflation, but also interfere with the coordinating mechanisms in an economy, then the quantity theory approach ignores an important research programme in economics — the study of the monetary framework necessary for prices to fulfill their coordinating function.[38] In the words of one expositor of Hayek's ideas:

> [Hayek] regarded prices...as empirical reflectors of specific circumstances and price changes as an *interrelated* series of changes in these "signals", which produced a gradual adaptation in the entire price structure (and hence in the outputs of different commodities and services) to the constant, unpredictable changes in the real world. Pricing, in short, is seen as a continuous information-collecting and disseminating process, but it is the institutional framework that determines both the extent to which and the degree of success with which, prices are enabled to perform this potential signalling or allocative function.[39]

PLANNING[40]

That nonpurposive social organizations will naturally evolve, and that an undesigned order can be the product of self-regarding acts are radical ideas in Western thought. These ideas run counter to the dominant approach to social questions, and were in ascendancy for only a brief period in Western intellectual history. It is not, then, entirely surprising that in economics these ideas have not gained complete acceptance; and that among the general public, even the so-called educated public, they are scarcely understood at all. But there is danger that because of essentially reactionary developments in social thought, the insights that were the product of the Enlightenment will be all but lost in practice. Adam Smith has aptly characterized the far older conception of social order:

> The man of system...seems to imagine that he can arrange the different members of a great society with as much ease as the hand arranges the different pieces upon the chessboard; he does not consider that the pieces upon the chessboard have no other principle of motion besides that which the hand impresses upon them; but that, in the great chessboard of human society, every single piece has a principle of motion of its own, altogether different from that which the legislature might choose to impress upon it. If those two principles coincide and act in the same direction, the game of human society will go on easily and harmoniously, and is very likely to be happy and successful. If they are opposite or different, the game will go on miserably, and the society must be at all times in the highest degree of disorder.[41]

The liberal conception of society of Adam Smith and the classical economists stands in sharp contrast with this older view. Yet once again in the United States, we see evidence of this older conception's becoming prominent, under the guise of national economic planning.

Proposals for planning are embodiments of the chess-game conception of social affairs, adapted to the problem of economic allocation. These proposals implicitly or explicitly deny that market forces guide decision making, so as to produce an overall, yet undesigned order; and they virtually ignore the function and role of nonpurposive economic organizations.

It is not that the arguments for national (i.e., central) economic planning constitute a direct *intellectual* challenge to opponents of such planning. As Professor Hayek has recently demonstrated in a devastating rebuttal of these proposals, modern exponents of "planning" possess as naïve and ill-thought out an approach to the problem as did the Bolsheviks and European socialists in the immediate post-World War I period. As he notes:

> The conception [collectivist economic planning], originally developed by some of the organizers of the German war economy during World War I, was thoroughly discussed by economists in the 1920's and 1930's; and all those familiar with that discussion will agree that it greatly contributed to the clarification of concepts and that one ought today to be entitled to assume that no competent economist who lived through that discussion would ever again talk about the issues in terms of the vague and confused concepts initially bandied about.[42]

Indeed, if this debate were being carried out in the scholarly arena, I doubt that the proposals put forth by those in favor of central planning would survive Hayek's recent criticisms. Unfortunately, the debate is not being carried forth in learned journals, or, generally, by learned men; rather, the proposals are being developed in the pages of the *New York Times,* and are being presented by politicians, businessmen and labor union leaders. This is an instance where those who accept the Smithian insights have won the intellectual battle, but are in danger of seeing their arguments lose out in practice. This situation surely represents a dilemma for economists. Economists generally disdain polemics, but they now face a situation in which influencing important political questions depends on their ability to present economic ideas in a polemical fashion. Certainly those economists who have chosen, for whatever reasons,[43] to ally themselves with the misleading arguments of the "planners" have not eschewed polemics.[44]

Hayek has done an admirable job of marshalling the chief arguments against central planning in his recent article. I do not intend to repeat these arguments here. But it is worth reminding ourselves of the central confusion of the early advocates of central planning, as it is the central confusion of the current advocates. The confusion concerns the very concept, "planning". If nothing else developed from the earlier debates over the question, it was the realization that a market economy is characterized by *continual* planning and plan-revision, albeit on a decentralized level.[45] As Hayek put it over thirty years ago, and recently repeated:

> The dispute between the modern planners and their opponents, is, therefore, *not* a dispute on whether we ought to choose intelligently between the various possible organizations of society; it is not a dispute on whether we ought to employ foresight and systematic thinking in planning our common affairs. It is a dispute about what is the best way of so doing. The question is whether for this purpose it is better that the holder of coercive power should confine himself in general to creating conditions under which the knowledge and initiative of individuals are given the best scope so that *they* can plan most successfully; or whether a rational utilization of our resources requires *central* direction and organization of all our activities according to some consciously constructed "blueprint". The socialists of all parties have appropriated the term "planning" for planning of the latter type, and it is now generally accepted in this sense. But though this is meant to suggest that this is the only rational way of handling our affairs, it does not, of course, prove this. It remains the point on which the planners and the liberals disagree.[46]

The challenge of "planning" confronts liberal economists with both the necessity and the opportunity of once again entering the popular debate over the trend of society that we will shape for the future. For it must be remembered that in constructing economics upon the principle of spontaneous order, earlier economists were ultimately interested in the problem of social and poltical organization. In part, then, I am proposing a return to an earlier conception of our task as engaging in political economy, though we now recognize a specifically scientific part of this field, *viz.,* economics. If economists do not conceive of their task thusly, it is doubtful whether there will be any practical opportunity in the future for the *scientific* pursuit of the implications of the principle of spontaneous order.

In order to pursue this goal, however, Austrian economists in particular must settle among themselves certain theoretical and seemingly purely scientific issues. I have argued above that among the neo-classical economists, the Austrians have most consistently adhered to Adam Smith's conception of the economic problem. Ironically, recent debates indicate anything but agreement among living members of this school. The positions of some could be construed as an implicit attack on the idea that there is a spontaneous market order in the economy. It is thus that I am led into a final section, involving a discussion of the Austrian approach to the question of the operation of spontaneously-generated forces in a market economy.

THE AUSTRIAN SCHOOL AND SPONTANEOUS ORDERING FORCES

In a recent paper, Professor Kirzner speculates about the exact status of the proposition that profitable opportunities have a tendency to be exploited.[47] He concludes that the propensity to discover opportunities is "inseparable from our insight that human beings act purposefully".[48] In fact, he even suggests a sympathetic reinterpretation of the perfect knowledge assumption of neoclassical price theory. Though orthodox use of the assumption is "carefree",[49] it does reflect a real insight: our "instinct" is seen as assuring us that profitable opportunities will be discovered. He then concludes that: "The perfect knowledge assumption of neo-classical economics carried this instinctive assurance to altogether unjustified lengths. In rejecting this dangerous assumption, we must take care not to expunge the entirely healthy instinct on which it rested".[50]

Kirzner's approach to the issue of profit exploitation in a market economy differs markedly from Lachmann's. Nonetheless, this proposition is not easily demonstrated, for two, interrelated reasons. First, Lachmann nowhere to my knowledge *explicitly* asserts the contrary proposition, *viz.*, that we have no grounds for believing that market participants will discover and exploit profitable opportunities. Second, though the figure of Professor Lachmann lurks in the background throughout the second-half of Kirzner's paper, the latter never brings this figure into the foreground.

The best way of elucidating this issue is to turn to Lachmann's own recent paper. Toward the end of his paper, Lachmann notes that:

> ...Skepticism about equilibrium need not deter us from appraising the relative strength and weakness of the equilibrating forces in various situations. In fact, it must encourage us to do so. To make confident use of the notion of equilibrium means to imply that the equilibrating forces will always be of sufficient strength to triumph over all obstacles. A skeptic might readily admit that such situations may exist, but he will probably doubt whether they occur with sufficient frequency to warrant our treating them as the norm. The more skeptical we are about general equilibrium as the central notion of economic analysis, the more encumbent on us it becomes to examine each situation individually with respect to the balance of strength of equilibrating and disequilibrating forces.[51]

It must be noted here that Kirzner's position is *not* that we should admire neoclassical price theory for its treatment of general equilibrium as "the central notion of economic analysis" or as "the norm". Rather, he suggests that we accept the proposition that equilibrating tendencies are strong. If the propensity to discover opportunities is "inseparable from our insight that human beings act purposefully", then we must likewise acknowledge a *tendency* toward equilibrium in all markets. *A fortiori,* there exist strong tendencies toward an overall, or general equilibrium *at each moment.* Individuals are, then, constantly revising their plans in a way that brings them into greater uniformity. This latter proposition, when thus phrased in dynamic terms, does seem to embody the principle of an undesigned order. It remains questionable, however, whether Lachmann wishes to embrace this principle. Thus he argues that:

> Experience shows that in the real world of disequilibrium different persons will typically hold different expectations about the same future event. If so, at best one person's expectation can be confirmed and all other expectations will be disappointed. Hence the "assumption that all other expectations are confirmed" cannot possibly hold. Nobody can take his equilibrium bearings if he does not know how others will act. In such a situation, which we have every reason to regard as normal, his equilibrium, as Hayek admits, cannot serve as a source of a "feedback mechanism". *The beacon that had been designed to keep entrepreneurs from straying from the narrow path of convergent expectations turns out, on most nights, to be rather dim.*[52]

Lachmann makes much of "the autonomy of

the human mind'' (as must all Austrians):

> This source of...new knowledge may well be past experience, but the latter requires interpretation by a discerning mind, and optimists will interpret it differently from pessimists. The human mind is a filter of experience, but each individual's filter is different from every other filter. Divergent expectations are thus as ''natural'' a feature of the social landscape as are divergent tastes. Changes in the constellation of knowledge are an inevitable concomitant of the passing of time, and changes in the constellation of expectations are bound to follow them.[53]

There is no denying the autonomy of the human mind, but one is reluctant to follow Lachmann in his apparent conclusion that we can say nothing about the likelihood that individuals will make consistent and coordinated decisions in the face of new knowledge. If anything, he seems to be saying that they will not coordinate plans. Yet, one always supposed it was an Hayekian insight that prices facilitate the diffusion of information and the coordination of plans.[54]

We are faced here with an important question: Do different and disparate individuals have a common reaction to shared experience? We certainly would not want to say they always do, or there would be little sense in referring to ''individuals''. Yet, there are obvious cases in which people do react to shared experiences in the same or similar ways: the perception of a fire in an enclosed room will lead to virtually everyone's making for an exit. Each person could form a reasonable expectation about what the others will do.

Moreover, many events are implicit demonstrations of the degree to which expectations do coincide. Changes in clothing fashion might be cited as an example. The ''agreement'' among separate manufacturers of apparel can be amazing, though clearly retail customers do not register their preferences for new fashion in a clothing futures market. Apparently individual entrepreneurs, experiencing the same signals and trends, will often form similar expectations.

None of these considerations are decisive, of course, but they are suggestive. Lachmann has clearly done a great service in pointing out forcefully the absurdity of an approach in which expectations *always* prove consistent. It is an essential feature of markets that not everyone reacts equally quickly to the continual changes in the data.[55] But it is true of at least some changes that they occur only because actors share a unanimous opinion about the future course of events.

Having eschewed the approach of assuming consistency among expectations at all times, one is not justified, without further argument, in arguing that we economists can make no assumptions about a tendency toward such uniformity, where this tendency is based on a universally recognized ''propensity to discover opportunities''. To do so would involve a nonsequitur. Again, to assume that all opportunities are at any moment fully exploited (and thus do not really exist as opportunities) would be, to paraphrase Kirzner a ''carefree'' use of concepts. But we must surely accept the existence of the propensity, or foresake the principle of spontaneous order. This point can be elaborated by recounting an event that happened at a recent (December, 1975) conference on Austrian economics.

Professor Lerner argued that without the concept of general equilibrium, defenders of the market system have no basis with which to carry on their defense. His criticism was in response to Lachmann's approach to the question of general equilibrium. I confess that I rose to the latter's defense at the time, by pointing out that we need only assume that there is market-day equilibrium. If prices clear existing supplies, then markets can operate successfully. ''That is all we need.'' I am now not sure that I did not err. Lerner may have been raising an important issue for Austrians.

We must distinguish two functions of markets. The first consists simply in a method of allocating existing supplies peacefully. Without prices and free markets, society requires guns and dictatorship. Examples of the latter type of social allocation of resources are numerous. But I am not sure that defenders of the market system can be satisfied with demonstrating that free trade is an alternative to the ''war of all against all'', however important this insight may be. For if supplies of goods are autonomous, if not gratuitous, it is dubious in what sense it can be said that prices coordinate activity. Indeed, I suspect that there is no coordination in the conventional sense in Lachmann's system.

For him apparently, *ex ante* plans bear no relation to *ex post* reality. Nor is there reason to believe that actors will move in the right direction in correcting past errors.

Lachmann does feel that the market "cannot make bulls and bears change their expectations, but it nevertheless can coordinate these". He continues:

> To coordinate bullish and bearish expectations is, as Keynes showed, the economic function of the Stock Exchange and of asset markets in general. This is achieved because in such markets the price will move until the whole market is divided into equal halves of bulls and bears. In this way divergent expectations are cast into a coherent pattern and a measure of coordination is accomplished.[56]

"Coordination" is being used here in a highly ambiguous sense. As Lachmann notes subsequently, he is talking not about *ex ante* consistency, but a Marshallian *ex post,* market day equilibrium.[57] This usage of coordination is in sharp contrast to the more conventional usage, and the usage that Austrians have traditionally employed.[58] "Coordination of plans" in traditional usage means there is *ex ante* consistency among transactors' plans. It is certainly scant comfort for one interested in this problem to be informed that there will be "coordination" *ex post.* Though related, *ex ante* and *ex post* "coordination" are conceptually dinstinct issues. To conflate the two issues is scarcely to contribute to the solution of either problem.[59]

It is certainly not the case that Austrian economists maintain that there ever exists *ex ante* consistency among all transactors' plans. But they have traditionally maintained, as Lachmann himself notes, that there is a tendency ("a strong tendency") toward diffusion of knowledge and increased consistency of plans. In other words, Austrian economists have always viewed the problem of economic coordination in dynamic terms. Do plans become more consistent over time? Lachmann apparently sloughs over the distinction between two very different propositions:

1. Economic activities are coordinated in the sense that all plans are successfully executed ("general equilibrium").
2. Economic activities are coordinated in the sense that a mechanism exists (i.e., the price system) that facilitates rational plan revision *and* leads to greater consistency of plans over time.

Lachmann switches back and forth between discussions of "the relative strength and weakness of the equilibrating forces", and "general equilibrium as the central notion of economic analysis" as though he were talking about the same problem (see p. 20 above). Surely the statement that "the market produces strong equilibrating forces" is fundamentally different than the assertion that "the market is always in (general) equilibrium". Does Professor Lachmann acknowledge the difference? It is certainly not clear that his arguments against the second class of statements are telling against the first. It is true that elsewhere Lachmann apparently acknowledges the existence of a tendency toward equilibrium in some areas: "A tendency toward the integration of the [capital] structure does exist".[60] But even there, he seemingly takes back what he has just granted.[61] I am afraid his occasional concessions to the existence of a tendency to greater consistency of plans in markets only confuse matters.

What I find most disturbing about Lachmann's position is that he criticizes a *static* general equilibrium model, but concludes that the modern Austrian approach to coordination, in a *dynamic* sense, is thereby called into question. I am not at all clear what he thinks "the general equilibrium perspective" is. The reader is told that Hayek's "early work was clearly under the influence of the general equilibrium model".[62] Elsewhere the reader is reminded that as early as 1933 (in "Price Expectations, Monetary Disturbances and Malinvestments") Hayek dealt with expectations. It was in 1936 ("Economics and Knowledge") that Hayek launched his attack on the static, general equilibrium models of mathematical economics. From this one must conclude that Lachmann is critical even of theories espousing a tendency toward overall equilibrium (i.e., he denies the principle of spontaneous order). I can draw no other conclusion.

It also seems that what Kirzner treats as the "equilibrating market process", Lachmann treats as a "disequilibrating" process. At first, I thought there was a mere semantic confusion.

I now believe the apparent semantic confusion is masking real conceptual differences. Kirzner sees any disturbance as developing equilibrating market forces. Lachmann sees change as disequilibrating.[63] The only reason that I can adduce is that Lachmann does not see market forces as being equilibrating in nature. If this is his position for markets as a whole, then he is generalizing the position taken by Keynes about securities markets to markets as a whole, *viz.*, that we cannot rely on spontaneous market forces to bring us to an equilibrium position after a disturbance. And if this be the case, then Lachmann's views represent a radical challenge not only to his fellow Austrians, but to all those who accept the existence of an undesigned market order. For it certainly seems that the only effective answer to the challenges with which I have been concerned lies in Kirzner's characterization of the entrepreneurial role.

As a final note, if I have misread Lachmann, I hope this section will at least serve to clarify issues and develop implications of the principle of spontaneous order. If the paper succeeded in nothing else, it would have served its purpose.

CONCLUSIONS

I would like to remind the reader that my original task was to demonstrate that seemingly diverse and particular problems are really instances of a more general theoretical disagreement. For it is only be directly addressing this general theoretical disagreement — disagreement that I have identified as devolving around the existence of an undesigned market order — that a fruitful search toward solutions of these individual problems can be begun. It is in the nature of an endeavor to demonstrate the interconnections between such seemingly disparate (but really connected) issues that no one of them is adequately treated. If the reader feels that each section calls for a separate paper on its topic, the author can only agree, and express the hope that more papers on these subjects will be forthcoming, albeit papers informed by the realization of the overall problem being studied.

NOTES

1. Adam Smith, *The Wealth of Nations*, ed. by Edwin Cannan (New York: The Modern Library, 1937), p. 651.
   It is frequently forgotten that Smith's defense of a relatively unhampered market is partly based on considerations of justice. Cf. Smith, pp. 141, 308 and 497. The ethical basis of Smith's system is emphasized in a paper by Joseph Cropsey, "The Invisible Hand: The Moral and Political Background", delivered as part of the Harry Girvetz Memorial Lecture Series at the University of California, Santa Barbara. Also, cf. James M. Buchanan, "The Justice of Natural Liberty" (Blacksburg, Virginia; Xerox, 1976).
2. My colleague, Roy Adams, first suggested this very apt analogy to me. Also: "...You can find in Keynes, as in Marx, almost anything..." F. A. Hayek, "No Escape: Unemployment Must Follow Inflation", in *Full Employment at Any Price?* (London: Institute of Economic Affairs, 1975), p. 43.
3. New York: Oxford University Press, 1968. Leijonhufvud's "Keynes and the Classics" (London: Institute of Economic Affairs, 1969) is also of importance here.
4. Leijonhufvud has argued that, contrary to contemporary practice, Keynes aggregated assets according to their term to maturity, and not according to whether they are real or financial. Cf. Leijonhufvud, *Keynesian Economics*, pp. 130–157.
5. Sir John Hicks has demonstrated the remarkable stability of the return on British consols in the nineteenth century. If the yield of consols can be taken as proxy for the long-rate, then his findings give some empirical basis to Keynes' hypothesis. See John R. Hicks, "The Yield on Consols", in *Critical Essays on Monetary Theory* (Oxford: The Clarendon Press, 1967), pp. 83–102.
6. It would be well to recall why speculators seek liquidity in this hypothetical situation; or, more precisely, why they attempt to shift their holdings from long-lived to short-lived assets. If long-rates are falling, but are expected to rise once again, then wealth-holders have a double incentive to sell long assets and purchase short assets. By selling at the long end of the yield spectrum, they can capture capital gains. By "going short" in the interim, they can purchase these assets back at lower prices and higher yields, once interest rates have risen again.
   All this assumes, of course, that in the aggregate, transactors seek to avoid capital uncertainty. On this point, cf. Leijonhufvud, *Keynesian Economics*, pp. 45–46; 282–314.
7. Cf. Leijonhufvud, *Keynesian Economics*, pp. 49–109.
8. See F. A. von Hayek, "Reflections on the Pure Theory of Money of Mr. J. M. Keynes, Part I", *Economica*, XI (August, 1931), 279.
9. Hayek, *Economica*, XI, 279.
10. J. M. Keynes, "The Pure Theory of Money. A Reply to Dr. Hayek", *Economica*, XI (November, 1931), 394–395. Of course, the question of whether the issues with which Keynes dealt could be treated without reference to capital theory was one of the points of dispute.
11. Joan Robinson, "What has become of the Keynesian Revolution?", in Milo Keynes (ed.), *Essays on John Maynard Keynes* (Cambridge: Cambridge University

Press, 1975), p. 125; quoted in F. A. Hayek, "No Escape: Unemployment Must Follow Inflation", in *Full Employment at Any Price?* (London: Institute of Economic Affairs, 1975), p. 43.

12. Leijonhufvud, *Keynesian Economics*, p. 43.
13. Cf. "Hayek and Keynes: A Retrospective Assessment", Iowa State University Department of Economics Staff Paper No. 20 (Ames, Iowa: Xerox, 1975).
14. See Leland Yeager, "The Keynesian Diversion", *Western Economic Journal,* XI (June, 1973), 150-163.

    It should be noted that what Clower and Leijonhufvud have done is to present an interpretation of Keynes that rationalizes his doubts concerning the strength of the spontaneous forces operating to maintain or restore full employment. This in no way indicates that these two authors share these doubts. Nonetheless, it is frequently assumed, without any firm basis, that because Leijonhufvud and Clower have attempted to explicate Keynes' views that they agree with them in their entirety!
15. Axel Leijonhufvud, "Effective Demand Failures", *Swedish Journal of Economics,* 75 (1973), 28. Leijonhufvud continues, noting that this issue "lies at the heart of two of the most prominent controversies in the field over the last decade: the Fiscalist vs. Monetarist controversy...and the controversy over the long-run stability of the Phillips-curve. The volume of writings on each of these continues to mount steadily with no clear-cut resolution in sight–in large measure because this central issue is not being effectively addressed".
16. Discussions about the energy problem are a prime example of this. They almost never even consider what spontaneous market forces might exist that would lead to the discovery of a new, coordinated solution to the allocation of energy resources. One very probable solution — perhaps the most probable if market forces were permitted to operate unfettered — would involve the destruction of the international oil cartel, whose existence makes a reallocation of energy resources appear necessary. And it is not merely noneconomists who are guilty of ignoring these market forces.

    On a more sophisticated level, modern welfare economics is virtually predicated on the absence of a spontaneous order in society, though part of the problem here is the static quality of welfare analysis.

    On the general, 20th century reaction against the principle of spontaneous order, cf. Leijonhufvud, "Effective Demand Failures", 31–32. Though the principle of spontaneous order continues as a cornerstone of economics — particularly of microeconomics — this only shows the inconsistency of current micro and macro economics — a point Leijonhufvud develops at length. Cf. Leijonhufvud, "Effective Demand Failures", 30–33.
17. The reader is referred to footnote 15 and the relevant portion of the text footnoted therein.
18. As but one example, see F. A. Hayek, *The Counter-Revolution of Science* (New York: The Free Press of Glencoe, 1955), pp. 25–35.
19. I adopt here James Buchanan's terminology to describe the Chicago School. Professor Lachmann has proposed the term "Neo-Ricardian" to refer to the distinct foibles of yet another school of theorists, the Cambridge (U.K.) School.
20. As one example of this Ricardian tendency, cf. the discussion of the general glut controversy in Thomas Sowell, *Classical Economics Reconsidered* (Princeton: Princeton University Press, 1974), pp. 46ff.
21. See Smith, pp. 35–36.
22. On this point, cf. James M. Buchanan, "Public Goods and Natural Liberty" (Blacksburg, Virginia: Xerox, 1976), especially 3–10.
23. Thus, theorists disagree over whether Smith held a labor cost theory of value, an entrepreneurial cost theory, or merely a labor measure theory. Smith may also have been unwittingly articulating a factor-exhaustion theorem for the long run. Nor could he seemingly distinguish between quasi-historical observations about the role of labor in production and theoretical statements of labor's contribution. This latter difficulty reflects Smith's "speculative" or "theoretical" approach to history. On this, cf. A. Skinner, "Economics and History — The Scottish Enlightenment", *Scottish Journal of Political Economy* (February, 1965), 1–22.
24. An example of Ricardo's approach is his treatment of the effects of an increase in the money supply. On this, see Gerald P. O'Driscoll, Jr., *Economics as a Coordination Problem: The Contributions of Friedrich A. Hayek* (Ames, Iowa: Xerox, 1975), chapter 3.2.

    Ricardo is also famous for his so-called "Equivalence Theorem" for taxation and public debt. But though this may be the most famous case of the Ricardian vice, it is the one case where Ricardo was *not* a Ricardian! See *The Works and Correspondence of David Ricardo,* Vol. I: *On the Principles of Political Economy and Taxation,* ed. by Piero Sraffa (Cambridge: Cambridge University Press, 1951), pp. 247–248; *The Works,* Vol. VI: *Pamphlets and Papers, 1815–1823,* pp. 185–188; Sowell, pp. 67–68; and Gerald P. O'Driscoll, Jr., *The Ricardian Nonequivalence Theorem, Journal of Political Economy,* (1977) pp. 207–210.
25. Ludwig M. Lachmann, "From Mises to Shackle: An Essay on Austrian Economics and the Kaleidic Society", *Journal of Economic Literature,* XIV (March, 1976), 55. Cf. Hayek, *The Counter-Revolution of Science,* pp. 29–30.
26. Cf. Hayek, "The Meaning of Competition", in *Individualism and Economic Order* (Chicago: University of Chicago Press, 1948), pp. 97–98.
27. An example of this dilemma is the role of money in a general equilibrium model. On this, see Hayek; *The Pure Theory of Capital* (Chicago: University of Chicago Press, 1941), p. 31.
28. Cf. Sowell, pp. 58–59.
29. Cf. Israel M. Kirzner, *Competition and Entrepreneurship* (Chicago: University of Chicago Press, 1973), 32–37.
30. Ignoring the factors that govern the emergence of a spontaneous order is in some sense more objectionable (from the viewpoint of one who accepts the principle) than denying its relevance. Failure to discuss the conditions under which a spontaneous order would emerge in an economic system prejudices the case against unhampered, decentralized decision-making. Thus, when obvious misallocations and "market failures" develop in an economy, suggestions that policy be directed toward *freer* markets will be met with incredulity.

    On Walras' assumption that markets will clear so as to produce an overall order, cf. O'Driscoll, *Economics* *as a Coordination Problem,* Chapter 2.2.

31. The hostility of the Chicago School to the approach of the Austrian School is a fact. What calls for explanation is the reason, which involves far more than a "family" squabble. The divisions between the two schools antedate each in the history of economic thought.

    For a recent example of the Chicago attitude toward the Austrian conception of economics, see the *Review of Competition and Entrepreneurship* by Benjamin Klein, *Journal of Political Economy,* 83 (December, 1975), 1305–1309. For an earlier example of similar treatment, see the *Review of Capital and Its Structure* by Martin J. Bailey, *Journal of Political Economy,* LXV (June, 1957), 265–266.

32. For instance, see the discussion in Hayek, *Monetary Theory and the Trade Cycle,* translated by N. Kaldor and H. M. Croome (New York: Augustus M. Kelley, 1966), pp. 43–45.

    In what follows, I will draw on my paper, "Friedrich Hayek and the Science of Choice", Iowa State University Staff Paper in Economics No. 24 (Ames, Iowa: Xerox, 1975).

33. Cf. Friedrich A. Hayek, *The Pure Theory of Capital,* pp. 33–34.

34. "Of course, it is one thing to assert that monetary changes are the key to major movements in money income; it is quite a different thing to know in any detail what is the mechanism that links monetary change to economic change; how the influence of the one is transmitted to the other; what sectors of the economy will be affected first; what the time pattern of the impacts will be, and so on. We have great confidence in the first assertion. We have little confidence in our knowledge of the transmission mechanism, except in such broad and vague terms as to constitute little more than an impressionistic representation rather than an engineering blueprint". Milton Friedman and Anna J. Schwartz, "Money and Business Cycle", in Friedman, *The Optimum Quantity of Money* (Chicago: Aldine Publishing Co., 1969), p. 222.

    Commenting on Ricardo's inattention to transitional periods, Schumpeter has remarked: "...In matters of monetary as of general theory, Ricardian teaching is a detour and...it slowed up the advance of analysis, which would have been much quicker and smoother had [Henry] Thornton's lead been followed — had Ricardo's force not prevailed over Thornton's insight". Joseph A. Schumpeter, *History of Economic Analysis* (New York: Oxford University Press, 1954), p. 704n.

35. Cf. Gerald P. O'Driscoll, Jr. and Sudha R. Shenoy, "Inflation, Recession and Stagflation", in Edwin G. Dolan, ed., *The Foundations of Modern Austrian Economics* (Kansas City: Sheed & Ward, 1976), pp. 185–211.

    For recent statements of Friedman's position, see "A Theoretical Framework for Monetary Analysis", *Journal of Political Economy,* 78 (March/April, 1970), 193–238; and "A Monetary Theory of National Income", *Journal of Political Economy,* 79 (March/April, 1971), 323–337.

36. I am referring here to the problem of distributional, or Cantillon-effects, which have been so long ignored in monetary theory. This gap in monetary theory is not accidental, for most theories of money incorporate neutrality assumptions. If money is neutral, then indeed there are no distribution effects. It is not remarkable, then, that monetary economists generally ignore the problem of distribution effects. What is remarkable is that the almost fantastic assumption of neutrality of money generally does not give economists pause. While it would be beyond the scope of this paper to demonstrate this proposition, it does seem that an economy in which money could be neutral is one in which there would be no demand for money. For where else but in a world of correct expectations and perfect coordination would changes in the supply-demand relation of money be neutral in their effects?

    The issue of the neutrality of money and distribution effects is considered in Friedrich A. Lutz, "On Neutral Money", in Erich Streissler, Gottfried Haberler, Friedrich A. Lutz and Fritz Machlup, *Roads to Freedom* (New York: Augustus M. Kelley, 1969), pp. 105–116.

37. Cf. O'Driscoll, *Economics as a Coordination Problem,* chapter 5.4.

38. I am quite aware that to some extent Friedman has dealt with the general institutional framework necessary for economic stability. And, indeed, I find his earlier work of more interest in this regard. I would point out that even in that he focused on price *levels,* and did not develop the problem of *coordination* at length. Cf. Milton Friedman, *A Program for Monetary Stability* (New York: Fordham University Press, 1960).

39. From the editorial introduction by Sudha R. Shenoy, ed., *A Tiger by the Tail* (London: Institute of Economic Affairs, 1972), p. 8.

40. The argument appearing in the beginning of this section was strongly influenced by a talk, "Adam Smith in Theory and Practice", delivered by Thomas Sowell in the Harry Girvetz Memorial Lecture Series at the University of California, Santa Barbara.

41. Adam Smith, *Theory of Moral Sentiments* (London: Henry G. Bohn, 1853), pp. 342–343.

42. Hayek, *The Morgan Guaranty Survey* (January, 1976), 4.

43. For one reason that might attract economists to this movement, see Hayek, *The Morgan Guaranty Survey,* 11.

44. See Wassily Leontief, "For a National Economic Planning Board", *The New York Times* (March 14, 1974), 37.

45. The modern Austrians have specifically emphasized this point. The work of Mises, Hayek, Lachmann and Kirzner are notable in this respect. For a recent example of a work written in the Austrian tradition that emphasizes the role of decentralized planning in a market economy, see Kirzner's *Competition and Entrepreneurship.*

46. This quotation appears in Chaper III of Hayek, *The Road to Serfdom* (Chicago: University of Chicago Press, 1944), pp. 34f; it is cited in Hayek, *The Morgan Guaranty Survey* (January, 1976), 5–6.

    The word "liberal" refers here, of course, to classical English liberalism, and not to twentieth century American liberalism.

47. Israel M. Kirzner, "Hayek, Knowledge and Market Processes", Paper Delivered at the Allied Social Science Association Meetings in Dallas, Texas (New York: Xerox, 1975); especially 28–29.

48. Kirzner, "Hayek, Knowledge and Market Processes", p. 29.

49. Kirzner, "Hayek, Knowledge and Market Processes",

p. 32.

50. Kirzner, "Hayek, Knowledge and Market Processes", p. 33.
51. L. M. Lachmann, "Reflections on Hayekian Capital Theory", Paper Delivered at the Allied Social Science Association Meetings in Dallas, Texas (New York: Xerox, 1975), 13.
52. Lachmann, "Reflections...," 8–9. Emphasis added. Aslo, cf. Lachmann, "From Mises to Shackle", 59–61.
53. Lachmann, "Reflections...", 9. "The Future is unknowable, though not unimaginable. Future knowledge cannot be had now, but it can cast its shadow ahead. In each mind, however, the shadow assumes a different shape, hence the divergence of expectations. The formation of expectations is an act of our minds by means of which we try to catch a glimpse of the unknown. Each one of us catches a different glimpse". Lachmann, "From Mises to Shackle...", 59.
54. In his most recent work, Lachmann notes that Mises, Hayek and Kirzner have emphasized the diffusion of knowledge in the market process. But he denies that the market can diffuse expectations in the same way. Cf. Lachmann, "From Mises to Shackle", 59. I believe the distinction between knowledge and expectations is a spurious one.
55. Cf. Kirzner, "Hayek, Knowledge and Market Processes", 30–31.
56. Lachmann, "From Mises to Shackle", 59.
57. Lachmann, "From Mises to Shackle", 61.
58. Cf. Hayek, "Economics and Knowledge", in *Individualism and Economic Order,* pp. 39–45.
59. It is true that one can find recent instances in which prominent economists imply "coordination" in the *ex post* sense. For instance, cf. Leijonhufvud, "Effective Demand Failures", 29. But there Leijonhufvud is dealing, *inter alia,* with the question of whether markets clear at all. But the general issue with which Lachmann is dealing is surely the problem of *ex ante* coordination. If not, one must ask "why all the fuss?" Generally it is not denied by non-Marxists that at least output markets clear.
60. Ludwig M. Lachmann, "On Austrian Capital Theory", in E. G. Dolan, *The Foundations of Modern Austrian Economics* (Kansas City: Sheed & Ward, 1976), p. 149.
61. "...Expectations of early change in the present situation may impede the process of adjustment, and even when this does not happen, the forces of adjustment themselves may be overtaken by other forces". Lachmann, "On Austrian Capital Theory", pp. 149–150.
62. Lachmann, "From Mises to Shackle", 60; also see 58n of that article.
63. In any event, this is what I make of his public statements on the issue, made at various times. Also, note the last line of the first Lachmann quotation appearing above. Lachmann juxtaposes "the forces of equilibrium" and "the forces of change". Lachmann, "From Mises to Shackle", 61.