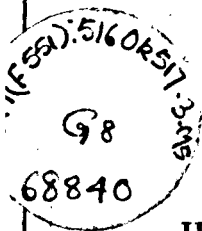


Harvard Economic Studies, 63

**MONOPOLY AND COMPETITION  
IN THE ENGLISH COAL TRADE  
1550-1850**

**PAUL M. SWEEZY**



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**PUBLISHER'S NOTE**

This book traces the development of the coal trade between the northern countries and London during the formative years of English capitalism. Economic historians have long been familiar with the combination of mine owners, generally known as the Limitation of the Vend, which dominated the trade from 1771 to 1845. In this study the origins of the Limitation are traced back to the economic institutions of the mediaeval town economy; and its eventual dissolution is shown to have been the inevitable result of the widening of the area of competition brought about by the introduction of the steam railroad. A considerable amount of new material in the way of original manuscripts and records has been brought to bear on the problems discussed. In the concluding chapter Mr. Sweezy shows that the kind of analysis which has been applied to one particular industry, is capable of being generalized so as to throw light upon the very important problem of the relation between monopoly and competition in the development of the capitalist system as a whole.

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**LONDON : HUMPHREY MILFORD**  
**OXFORD UNIVERSITY PRESS**

Monopoly and Competition in  
the English Coal Trade  
1550-1850

BY

PAUL M. SWEEZY

INSTRUCTOR IN ECONOMICS IN HARVARD UNIVERSITY



CAMBRIDGE  
HARVARD UNIVERSITY PRESS  
1938

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CAMBRIDGE, MASS., U. S. A.



*To The Memory of  
My Father*

## PREFACE

A SATISFACTORY theory of economic development will have to find a place within its framework for a careful analysis of the forces which determine the form and degree of competition prevailing at various stages of economic evolution. Before such a theory can be successfully formulated, however, a great deal of detailed investigation into the relevant facts is essential. The purpose of the present study is to make a beginning in this direction; while the tentative generalizations of the concluding chapter are intended to serve as guides for further research in this important branch of economics.

This study was first submitted as a doctoral dissertation at Harvard in the spring of 1937 under the title "The Limitation of the Vend," a name frequently used to designate the late eighteenth- and early nineteenth-century cartel of Durham and Northumberland coal owners. It has since been expanded to include a treatment of the period from 1550, when the coal industry first assumed national importance, to 1771, the date fixed by a parliamentary committee of 1800 as marking the beginning of the Limitation.

My interest in the problems of economic development was first aroused by a study of Marx's brilliant investigations into "the law of motion of the capitalist system." Marx opened up a vast territory which has been very inadequately explored. For an appreciation of the possibilities of the English coal trade as a revealing case study, I am indebted to Professor Hermann Levy's stimulating and suggestive book, *Monopoly and Competition*. My debt to Professor J. U. Nef's two-volume study, *The Rise of the British Coal Industry*, will be obvious to the reader. Professor Nef has made an outstanding contribution to the understanding of economic history for which every one working in the field must feel grateful.

I wish to express thanks to Professor Henry Louis, Director of the North of England Institute of Mining and Mechanical Engineers, Newcastle-upon-Tyne, for affording me every facility to use

the invaluable collection of documents and pamphlets in the possession of the Institute; to Mr. T. V. Simpson, whose knowledge of these documents was of great assistance; to Mr. J. T. Robson, Assistant Secretary of the Durham and Northumberland Coal-Owners' Association, for putting at my disposal the minute books of the Limitation of the Vend for the last two decades of its existence; and to Sir William Beveridge, Chairman of the International Scientific Committee on Price History, for permission to make use of data on coal prices in the late eighteenth and early nineteenth centuries which are soon to appear in the Committee's study of the history of English prices.

P. M. S.

Dunster House,  
Cambridge, Massachusetts  
May 1938

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**MONOPOLY AND COMPETITION IN THE  
ENGLISH COAL TRADE : 1550–1850**

## CHAPTER I

### THE RISE OF THE HOSTMEN

UNTIL well along in the nineteenth century "The Coal Trade," to the Englishman, meant specifically the business of mining coal in the counties of Durham and Northumberland, shipping it to London, and distributing it to the manufacturers and household consumers of the metropolis. Between 1800 and 1840 no fewer than five parliamentary committees investigated "The Coal Trade," and in all the volumes of testimony and statistics gathered together there is hardly more than an occasional mention of the other branches of the great British coal industry. This book deals with "The Coal Trade" in the sense just indicated, and its main emphasis is on the organization of the trade in the northern counties.

During the greater part of the seventeenth century the coal trade of the Tyne area, at that time almost the only source of supply for the London and east-coast markets, was organized through the Company of Hostmen of Newcastle-upon-Tyne. The analysis of subsequent developments must, therefore, begin with the origins and functions of the Hostmen's Company.<sup>1</sup>

In the municipal life of the Middle Ages, hosts, hostlers, or hostmen were those free inhabitant householders to whom was assigned the duty of entertaining merchant strangers, of becoming answerable for their peaceful conduct, and of supervising the sales and purchases of their wares and merchandise. It was one of the privileges of their position that they should furnish their guests with such supplies as were not monopolised by any trading gild already established in the place in which they resided.<sup>2</sup>

This definition contains the key to an understanding of the dominant role which the Newcastle Hostmen came to play in the coal trade. Until the closing years of the sixteenth century coal was a comparatively unimportant article of commerce, but during

<sup>1</sup> This task is enormously lightened by the *Extracts from the Records of the Company of Hostmen of Newcastle-upon-Tyne*, edited and supplied with an excellent introduction by F. W. Dendy, Publications of the Surtees Society, vol. 105 (1901).

<sup>2</sup> *Records of the Company of Hostmen*, p. xiii.

the reign of Elizabeth output expanded at an enormous rate. This development was closely connected with the change in ownership of Church lands and with the expansion of industry; but, most important of all, it was due to the growing scarcity of timber.<sup>3</sup> The change wrought in the position of the hostmen by this sudden expansion in the demand for coal was revolutionary. Around 1500 the hostmen had dealt in coal simply because there was no one else to do it; the traffic was so small that it probably never occurred to any one to challenge this privilege.<sup>4</sup> By 1600, when the hostmen received a royal charter of incorporation, they were wealthy capitalists in control of the Newcastle government.

It is unfortunately not possible to trace in detail this very interesting development in the position of the hostmen. It is fairly clear that they had formed themselves into a company by 1517, and as late as 1576 it appears that they were still performing the traditional functions of hostmen. But, as Dendy remarks, "they were by that time more busily engaged in obtaining for themselves a monopoly of the sale of coal, the demand for which was then rapidly increasing."<sup>5</sup>

A great transformation was at the same time going on in the composition of the Hostmen's Company. As the coal trade ex-

<sup>3</sup> J. U. Nef, *The Rise of the British Coal Industry*, 2 vols. (1932); see especially vol. I, part II.

<sup>4</sup> Nef's account of the origins of the hostmen's privileges with respect to coal is vague and appears difficult to reconcile with that given by Dendy. Nef says (I, 405); "Members of the gild merchant [established in the reign of King John], while retaining their affiliation with their old fraternities, devoted themselves more and more to the pursuit of foreign trade. By an early agreement, the nature of which remains obscure, certain of them came to deal, to the exclusion of the rest, in the sale of coal to the shipmasters. They called themselves 'free hosts,' or 'hostmen,' words which might have been applied to all citizen traders, but which belonged in fact only to those who sold coal and grindstones for shipment." Dendy, however, quotes a document of the year 1343 which conclusively proves that at that time the term "host" was used in Newcastle in the sense already defined, fish and herrings being the only articles in respect to which the host was supposed to have any special privileges (*Records of the Company of Hostmen*, p. xxviii). That the hostmen were members of the guild merchant we need not doubt, but it seems a bit far-fetched to assume that a definite agreement was made allotting to them the trade in coal. After all, until well along in the sixteenth century the annual export of coal from the Tyne was only a few thousand tons (Nef, I, 10), and it seems natural enough to suppose that the hosts would supply this to their guests without any opposition or objection.

<sup>5</sup> *Records of the Company of Hostmen*, p. xxix.



panded, more and more well-to-do merchants, not only in Newcastle but also from other districts, turned to it as a likely occupation for themselves and their accumulated wealth.<sup>6</sup> Admission to the Hostmen's Company was easy to all who "had Colemynes, or had Coales of their owne" but otherwise only to those "whose Parentes and Masters were free of the saide Society."<sup>7</sup> Naturally enough, the merchants, who now leased mining property and began opening new collieries, joined the Company and soon came to dominate in its councils.<sup>8</sup>

The rise of the masters of coal to power in the Company and the town government did not proceed without opposition. This is best illustrated by the struggle which took place over the so-called Grand Lease during the closing years of the sixteenth century. The circumstances surrounding the origin of the Grand Lease are somewhat mysterious, but it seems clear that in the year 1582 a certain Thomas Sutton, acting on behalf of the Crown, obtained from the Bishop of Durham a lease running for ninety-nine years, on all his coal lands in the manors of Whickham and Gateshead. The rental agreed upon was absurdly low in view of the fact that the lease gave control over some of the richest and most favorably situated mines in the whole Tyne district. Sutton, in turn, negotiated the sale of the lease to Henry Anderson and William Selby, two of the richest merchants in Newcastle, who, it seems, were supposed to be acting on behalf of the township.<sup>9</sup>

Anderson and Selby, though they had used town money in purchasing the lease and had agreed to turn it over to the mayor and

<sup>6</sup> Mining in the Tyne area was already on so large a scale as to require a very considerable investment on the part of any new adventurer. On all this, see the excellent discussion in Nef, vol. II, chap. iii, especially pp. 38-43.

<sup>7</sup> This was part of the Hostmen's answer to a complaint which had been preferred against them by the mayor and burgesses of the town shortly after the incorporation of the Company in 1600. The above policy as to admissions was said to have been in effect by the Hostmen "during the tyme of their remembrance" (*Records of the Company of Hostmen*, p. 21).

<sup>8</sup> The extent to which the new mines dominated the situation by 1600 is well illustrated by the figures on exports of coal. In 1561-62, 21,000 tons were shipped out of Newcastle; in 1597-98 this figure had risen to 163,000 tons (Nef, vol. II, Appendix D). By far the greater portion of this increase must have come from newly opened collieries.

<sup>9</sup> This much of the story is pretty well agreed upon. For further details, see Nef, I, 151-152.

burgesses, now proceeded to betray their trust and "set over the lease to private men, of whom some are recusants, and divers others notoriously suspected to be popishly and evil affected."<sup>10</sup> The individuals concerned were, of course, none other than the small group who already exercised a controlling voice in the affairs of the Hostmen's Company and the town government.<sup>11</sup>

For a while all went well. Between 1581 and 1591, out of eleven mayors eight were among the holders of the Grand Lease; the same group controlled the board of aldermen and Newcastle's two seats in Parliament.<sup>12</sup> But serious opposition was brewing. A London complaint of 1595 asserted that before the Grand Lease, coals had sold for 4s. per chaldron but that they had been raised by successive steps to 9s. This was attributed to monopolistic restriction, and the Lords of the Privy Council were asked to take appropriate action to free the trade and bring down the price of coal.<sup>13</sup> Needless to say, those who were not sharing in the profits of this lucrative policy were only too anxious to attack the beneficiaries unless or until they could force their way into the inner circle.

The freemen of Newcastle now ranged themselves into two parties. The "ins" owned the best coal mines, including the Grand Lease, and controlled the distribution of political patronage. These were known as the "Grand Lessees." The "outs," some of whom were doubtless smaller coal owners whose interests were ignored by the ruling faction, seized upon the alleged abuses in connection with the Grand Lease to further their cause. They called themselves "Non Grand Lessees," and their leader was one Henry

<sup>10</sup> Richard Welford, *History of Newcastle and Gateshead*, 3 vols. (1887), III, 117.

<sup>11</sup> It was maintained in one bill of complaint that the Grand Lease was first made over to the Hostmen, then numbering about sixty persons, "who have lately [written about 1595] compounded and made over their right to a far less number, viz., to about 18 or 20, who having before coal mines of their own, and so engrossing the whole commodity and reducing the trade into a few men's hands, have combined themselves to sell their sea coal at their own prices for their best advantage and the public detriment . . ." (*Records of the Company of Hostmen*, p. 2). The second part of this statement is probably reasonably accurate, but the role of Anderson and Selby is omitted and any further evidence that the Company of Hostmen ever held the lease is lacking.

<sup>12</sup> *Nef*, II, 121.

<sup>13</sup> *Records of the Company of Hostmen*, pp. 2-5.

Sanderson, the Queen's customer in the port of Newcastle, himself a burgess of the town.<sup>14</sup> Not the least of their complaints was that "the grand lessees strive by complotting, procuring elections, and otherwise, to prefer themselves and their favourers, though unworthy, and keep back non-grand lessees, and such as favour reformation of our town, be they ever so worthy."<sup>15</sup>

The bitter quarrel between the two factions which marked the closing years of the sixteenth century is properly to be understood as a struggle over the machinery of government which carried with it will-nigh absolute control of the profitable and rapidly expanding coal industry. The Grand Lease was merely the symbol for the real prize.

The Non Grand Lessees sought allies in the Bishop of Durham and the authorities of London who had every interest in cheap coal; while the ruling faction did not hesitate to vote an annuity to the Earl of Essex in order to strengthen their position at Court.<sup>16</sup> The outcome, however, was hardly ever in doubt. The central government could not well afford to be without the support of the wealthiest group in the north, and it is certain that a settlement favoring the cause of the discontented small merchants would have lacked all semblance of stability. Accordingly, when the case came to trial before a special committee appointed by the Privy Council in 1598, a decision was handed down which, as Nef says, "amounted to a virtual endorsement of the right of the principal coal merchants to control the municipal government."<sup>17</sup>

The victorious masters of coal were now in a position to push ahead and consolidate their gains. This they did by requesting a new charter for Newcastle which was duly granted by Elizabeth on March 22, 1600. The charter<sup>18</sup> is truly a remarkable document. On two fronts, it guaranteed to the Grand Lease faction about all they could ask for. The *quid pro quo* consisted of power-

<sup>14</sup> Welford, *History of Newcastle*, III, 112-113.

<sup>15</sup> Welford, *History of Newcastle*, III, 118.

<sup>16</sup> Nef (I, 121-125) gives an excellent detailed account of the dispute.

<sup>17</sup> II, 125.

<sup>18</sup> A simplified summary is printed in Welford, *History of Newcastle*, III, 136-143. The part of the original relating to the Company of Hostmen is to be found in *Records of the Company of Hostmen*, pp. 10-17.

ful support for the Crown and the central government plus an agreement to the raising of the tax on coal from 4*d.* to 1*s.* per chaldron. Privileges and protection on the one hand for support and revenue on the other, such was the nature of the bargain struck between the coal barons and Queen Elizabeth in 1600. It is not difficult to surmise that both sides were substantial gainers.

Formally, the charter did two things which at first sight might appear to be quite independent of each other. First, it prescribed the method by which the town officers were to be selected; this was so arranged that the first incumbents should have complete discretion in choosing their successors. Second, it incorporated the Company of Hostmen and guaranteed to them "such liberties, privileges, immunities, jurisdictions, uses, and customes, and every of them, for and concerninge the loadinge and unloadinge, chargeinge dischargeinge of sea coles, stone coles, and pitt coles, and stones called grindstones, rubstones, and whetstones."<sup>19</sup>

Actually, these two seemingly independent aspects of the charter were intimately related in that each constituted a grant of power to the same set of individuals, the erstwhile Grand Lease faction.<sup>20</sup> The governor and nine of the first ten members of the Company were Grand Lessees; most of the remaining forty-odd members were their relatives or henchmen. The board of aldermen consisted simply of the first ten members of the Company. William Jennison, Grand Lessee, was both mayor and first governor of the Company. William Jackson, town clerk, was clerk of the Company.

The new century opened with the largest mine owners in full possession of the positions of power and wealth.

<sup>19</sup> *Records of the Company of Hostmen*, p. 16. It is not clear what privileges, etc., are referred to. Dendy surmises that the reference is to a recital at the beginning of the charter, citing privileges previously belonging to the mayor and burgesses "by prescription as by means of divers charters, grants and confirmations as well by us as by divers of our ancestors Kings of England granted" (p. 16*n.*). Be that as it may, there is no doubt that the hostmen interpreted this grant as giving them exclusive power to deal in coal, though not to mine coal. This question is discussed further later on.

<sup>20</sup> *Nef*, II, 125-126.

## CHAPTER II

### THE DOMINANCE OF THE HOSTMEN

It is important to understand that in 1600 it was the big *mine owners* who controlled the municipal government of Newcastle and the Company of Hostmen, in spite of the fact that no exclusive privileges with respect to owning and working collieries existed. At this time the term "hostman" meant one who owned parts in colliery enterprises and undertook the marketing of his share of the output.<sup>1</sup>

The history of the next century is the history of the separation of the mine-owning hostmen from the rest of the fraternity, a process which took place along with the gradual wearing out of the Company's special privileges.<sup>2</sup> In the 1730's, a decade chosen only because we know more about it than any other in the early eighteenth century, the mine owners were acting quite independently of their fellow hostmen.<sup>3</sup> The very word "hostman" was now in popular language synonymous with "fitter," a mere agent who arranged for the details of sale, shipment, customs payment, etc.<sup>4</sup> By the end of the first quarter of the eighteenth century, all pretense to exclusive privileges had to be abandoned. An attempt to revive the claims later in the century met with no success.<sup>5</sup>

Up to the time of the Civil War the Hostmen's Company served

<sup>1</sup> A perusal of the documents printed by Dendy in *Records of the Company of Hostmen*, pp. 1-28, makes this perfectly clear. At the same time there were hostmen whose only function was marketing coal, though they were of secondary importance.

<sup>2</sup> This was partly specific to the coal trade, partly a question of the general system of special privileges and restrictions which sustained setback after setback during the seventeenth century. The development of any given industry both contributes to and is profoundly affected by the general disintegration of a whole legal system. The very interesting problems which might be raised in this connection are beyond the scope of this study.

<sup>3</sup> See below, Chapter IV.

<sup>4</sup> *Records of the Company of Hostmen*, p. xlviii. A brief in a lawsuit of 1703 recites: "There are, at Newcastle-upon-Tyne, men called hostmen or fitters. The business they take upon them is to take care of the loading of coals brought from the adjacent collieries, and to carry them in keels and sell them to the ship-masters. . . ." See also Nef, II, 132.

<sup>5</sup> *Records of the Company of Hostmen*, p. xxxvi.

the large mining capitalists in a twofold capacity. First, it was the instrument with which they excluded potential entrants to the field of mining; second, it was the means by which they protected themselves from the disastrous results of unrestricted competition within their own ranks.<sup>6</sup> With the gradual change in the character of the Company and its loss of special privileges, however, the mine owners sought new methods and media for accomplishing these highly important ends. The evolution of normal capitalist methods is a striking feature of this development. By the 1720's we find the owners excluding new entrants to the field by buying up good coal lands and wayleave leases.<sup>7</sup> This phase did not last long, however; the rapid expansion of demand which took place during the middle years of the eighteenth century produced a situation in which the whole Tyne basin, with the then existing means of transportation, was not unmanageably large. As to the organization of competition (or monopoly), the development of the cartel form proceeded to ever higher degrees of perfection right down to the middle of the nineteenth century. But we are getting ahead too fast; we must return to 1600 and fill in the framework which has been sketched out.

From the granting of Elizabeth's charter to the outbreak of the Civil War the colliery capitalists were in complete control.<sup>8</sup> They used their power to further their business interests in a variety of ways, the most important of which was in keeping new adventurers out of the coal industry. Precisely how they accomplished this is not clear. Nef, assuming that "the rules of the Hostmen's Company forbad members — under pain of a fine or of disfranchise-

<sup>6</sup> There were only a couple of dozen sea-sale collieries during the seventeenth century (see Nef, I, 371; II, 20), and mining by its very nature is subject to heavy overhead costs. The dangers of ruinous competition under such circumstances are obvious.

<sup>7</sup> See below, pp. 24-29.

<sup>8</sup> In every year but three one of the prominent hostmen was also mayor, while, according to Nef, the non-hostman who held office in these three years was solicitor to the Company (Nef, II, 126). A list of members of the Company and a list of governors are given in *Records of the Company of Hostmen*, pp. 266 and following and 263-264, respectively, while a list of Newcastle mayors, sheriffs, and members of Parliament from 1581 to 1640 is given in Welford, *History of Newcastle*, III, 420-421. A perusal of these lists gives an indication of the extent to which a few families monopolized the positions of power in the Company and town.

ment—to purchase the coal of non-members,” comes to the conclusion that so long as the rules were enforced only hostmen “found it profitable to become partners in local collieries.” He thinks that “up to the period of the Civil War, members seem seldom to have broken the rules.” This theory is, of course, adequate to account for the observed fact that “the number of non-hostmen with investments in mining on the Tyne steadily diminished.”<sup>9</sup>

In reality, however, there does not appear to have been any rule of the Company forbidding members to buy from non-hostmen. The principle on which the Company was based was that of preventing non-hostmen from buying or fitting coal, not of forbidding hostmen from buying from non-member mine owners. What *was* prohibited was what was called “coloring” unfreemen’s (non-hostmen’s) coal; that is, allowing one’s name to be used to cover up illegitimate transactions. The hostmen’s oath says nothing about buying from non-members but does prescribe that “[you shall] no unfreeman’s goods as Coles and gryndstones avowe for yours, nor lode colourable coles or grindstones for any unfreeman whatsoever.”<sup>10</sup> A ruling of 1651 throws further light on this matter:

Whereas there are divers Brethren of this Companie, for base and selfe ends do daily Color Unfreemens Coles, and Grindstones Contrarie to their Oathes taken at their severall Admissions, whereby the Trade of the Brethren of this Companie is exceedingly impaired, and unfreemen much encouraged which, without speedie remedie, will prove the utter undoinge of this Fellowship. The Governor, etc., takeing the premisses into their serious Consideracion, do hereby declare that what Brother or Sister, soever of this Fellowship shall Color any Coles or Grindstones, Belonginge to any unfreeman for any profit or Advantage whatsoever *where the profit and losse of the Coles and stones vended do not wholly and altogether accrewe to the Freeman, in whose name the said Coles and Grindstones are Clered*, That such Freeman doth positively violate his Oath, and ought to be disfranchised, by the Ancient Acts of this Companie.<sup>11</sup>

The implications of this order are clear. A hostman might buy from a non-hostman mine owner so long as he acted as a *bona fide*

<sup>9</sup> Nef, II, 21.

<sup>10</sup> *Records of the Company of Hostmen*, p. 262.

<sup>11</sup> *Records of the Company of Hostmen*, p. 92. The italics are mine.

principal in the transaction and not as a mere agent. Furthermore, it is evident that by this time (1651) even this restriction was being increasingly disregarded. The process of evolution whereby hostmen became fitters was already well under way.

How, then, was the coal trade made unattractive to non-hostmen in the period before the Civil War? It is not difficult to surmise. Remembering that at that time most of the hostmen were mine owners or in some way dependent upon the hostman mine owners, it is easy to understand that the unfree mine owners, being forced to sell to their rivals, would be severely dealt with. We can be perfectly certain that the Newcastle authorities took every pains to see that the unfreemen should not dispose of their own coal to the ship masters. This seems to have been the burden of the complaint directed against the mayor and burgesses of Newcastle by Ralph Gardiner, spokesman of the unfree owners during the Commonwealth period. Among the many charges lodged against the Newcastle authorities before the Committee for Trade and Corporations in 1653 was one that "they will not suffer any of the coal owners, in any of the two counties, to sell their own coals, but the owners must either sell their coals, to the free hoast-men, at what price they please, and then all ships must give them their own price, or get none, which makes coals so dear."<sup>12</sup> It seems pretty clear that the trouble was not that the unfree colliery owners could not sell to the hostmen, as Nef assumes, but rather that they could sell to no one except the hostmen.

Whether this be the correct explanation or not, there is no doubt that up to 1640 the large mine owners were successful in limiting the influx of new competitors. In 1636 Sir William Selby's son was slain in a duel, and his father found it necessary to dispose of certain collieries to settle outstanding debts of £11,000. The difficulty was to find a buyer. "No man," he claimed in a petition to the Crown, "can make any gain by them but . . . a free hostman of Newcastle-upon-Tyne; and there being very few . . . free of that company that can dispend so much money . . . your petitioner in all likelihood will receive no fruit. . . ." He prayed that

<sup>12</sup> Ralph Gardiner, *England's Grievance Discovered in Relation to the Coal Trade* (1655; reprinted 1796), p. 69.



such persons as should buy the mines might be admitted to trade as free hostmen of Newcastle, as he himself was, by which means he would soon find chapmen.<sup>13</sup>

So much, then, for the restrictions on entry to the industry in the period 1600-1640. Let us examine the other problem which always beset the northern coal owners; namely, the regulation of competition among themselves. Here again we find that the beginning of the Civil War forms a dividing line between two phases of development.

It will be recalled that even before the incorporation of the Hostmen's Company, complaints were voiced in London against the monopolistic restrictions practiced by the Newcastle coal owners.<sup>14</sup> What kind of arrangement the latter may have had, however, does not appear until the Company began to keep formal records, commencing in 1600. Between this date and 1640, agreements to regulate output are recorded in the Company's books in the years 1603, 1605, 1617, 1622, 1627 and 1637.<sup>15</sup>

The first of these, dated February 26, 1603, involved twenty-nine coal owners, roughly half of the total membership of the Company. It is notable, however, that the agreement is made in the name of the whole company.<sup>16</sup> The essence of the arrangement was sale through a common medium of stipulated quotas. The agreement was to last until Christmas, 1603, at which time it was proposed "to contynue or alter the same accordinge as yt shall be found profytable or hurtfull to her Ma'tie and the comonwealth."<sup>17</sup> In view of opposition, both locally and more particularly in London,<sup>18</sup> it appears that the agreement was allowed to lapse at its expiration.

<sup>13</sup> Nef, II, 22; Welford, *History of Newcastle*, III, 343.

<sup>14</sup> See above, p. 6, note 11. Also *Records of the Company of Hostmen*, pp. 2-7.

<sup>15</sup> We shall mention here only such aspects of these agreements as are important for our purposes. The texts of the first four agreements are printed in *Records of the Company of Hostmen*, pp. 43, 51, 63, 67, 72. Nef has analyzed them in detail (II, 110-115).

<sup>16</sup> "Nowe, for the better performance of the forsaide ordynances and articles agreed upon, we, the Governor, Stewards and whole fraternytie of Hostmen, do herebie order, agree, and consentt, etc." (*Records of the Company of Hostmen*, p. 47).

<sup>17</sup> *Records of the Company of Hostmen*, p. 44.

<sup>18</sup> Welford, *History of Newcastle*, III, 154-156.

Abuses, symptomatic of a sharp competitive struggle, rose to plague the trade and to defraud the customs. The result was a new agreement early in 1605. This compact, differing only in detail from the earlier one, was recorded in the Company's books but was not officially endorsed by the fellowship as such, the signatories being the governor, the two stewards, and thirty-seven other members. It would hardly be justifiable to attach particular significance to this circumstance, however, in view of the fact that the later agreements were like that of 1603 in this respect. This time the shipmasters set up a howl against the owners and succeeded, after a two months' boycott, in inducing the Privy Council to order the dissolution of the "partnership."<sup>19</sup>

The next recorded agreement occurred in 1617. It follows the previous models fairly closely, providing, as they did, for sale in common. Forty-eight hostmen were allotted quotas. No information about its duration or the causes of its dissolution has survived.

The agreement of 1622, involving thirty-one hostmen, differs in no important respect from those preceding it. Once again the aggrieved shippers carried their case to the Privy Council, which in 1623 passed adverse judgment upon the combination, "as being a neere monopolie tending to the greate damage of the publique."<sup>20</sup>

The agreement of 1627 differs from all the other seventeenth-century limitations of which we have record. At the same time it is obviously a rudimentary forerunner of the elaborate nineteenth-century agreements which we shall analyze later on in this study.<sup>21</sup> Provision for sale in common is dropped, each owner undertaking to market his own quota. Fines are provided for those exceeding their allowed quantities, and bonuses for those who are short. The chief difference between this and the later arrangements lies in its lack of any permanent machinery. Even this difference, perhaps, is of less significance than one might suppose, since it is obvious

<sup>19</sup> Nef, II, 114; *Records of the Company of Hostmen*, p. 56.

<sup>20</sup> Nef, II, 115. There was in this no threat to the hostmen's privileges, but only to their combining among themselves. The Statute of Monopolies, also passed in 1623, expressly exempted the Company of Hostmen from any of its restrictive or punitive clauses (*Records of the Company of Hostmen*, p. 28).

<sup>21</sup> For purposes of comparison both the Tyne agreement of 1835 and the 1627 compact are included as appendices.

that the Hostmen's Company itself performed many of the functions for which special instruments had later to be fashioned. For example, the Company was always on the lookout for secret rebating and the giving of over weight, evils which were just as much a source of worry to the eighteenth- and nineteenth-century combinations.

The limitation of 1637 was a special case which should not be lumped together with those already discussed. Charles I, hard up for funds, decided to establish a monopoly in coal for his own benefit. He made a contract<sup>22</sup> with the hostmen to buy all their coal at a fixed price, with the intention of selling it at what advance he could get. The contract also contained provisions for apportioning the vend among the owners. Originally the limitation was to run twenty-one years, but the outcry which went up from shippers and consumers alike forced the king to abandon the scheme in a few months.<sup>23</sup>

<sup>22</sup> Welford, *History of Newcastle*, III, 356.

<sup>23</sup> Nef, II, 115, 279 and following. Nef remarks that the right to form a selling combine was the only thing the hostmen failed to get from Elizabeth in return for their agreement to the one-shilling tax. They would have had it from Charles had it not been for the resistance of the shippers.

## CHAPTER III

### THE DECLINE OF THE HOSTMEN

THE opposition of the petty merchants and coal owners of Newcastle to the dominance of the Grand Lease faction did not, of course, cease with the latter's victory in 1600. The Non Grand Lessees apparently decided, shortly after the granting of the charter, to force their way into the Hostmen's Company and to attempt to protect their interests by boring from within. One of their number, Robert Dudley, had been admitted as one of the first ten charter members of the incorporated Company, perhaps, as Nef suggests, "to placate the reforming faction."<sup>1</sup> In 1603, for reasons which can only be guessed, Dudley was chosen governor of the Company and mayor of the town, offices which very often went together at that time. He soon had an opportunity to strike a blow in behalf of his former associates.

The first limitation agreement had been entered into in February 1603. It aroused a good deal of bad feeling on the part of a majority of the townspeople.<sup>2</sup> Capitalizing this disposition of the citizens, Dudley seems to have instigated a campaign against the right of the hostmen to exclude whom they chose from their fraternity. The complaint was amply justified; since the charter, only four new members had been admitted in nearly three years. In a complaint against the hostmen, lodged in the Court of the Council of the North, and in a petition to the new king, the mayor and burgesses recited their grievances.<sup>3</sup> No one was admitted unless he "would paie to the said Corporacion greate and intollerable fynes and taxacions." Furthermore the hostmen "have conspired, covenanted, and practized together most unlawfull actes," including "Ingrossing of Coles . . . enhansing of the prizes of

<sup>1</sup> Nef, II, 125.

<sup>2</sup> Welford, *History of Newcastle*, p. 154.

<sup>3</sup> For the complaint and petition along with the hostmen's answer, see *Records of the Company of Hostmen*, pp. 19-24. Dendy explains the Council of the North in his introduction, pp. xxxix-xl.

Coles . . . abridginge of the wages and duties of poore Laborers," etc. It is notable that the petitioners' only request was "that the like order may be observed for their admittance into the said Corporacion of Hostemen as was wonte when it was only a fraternitie."

The complaint was successful, the Council of the North issuing a decree on December 21, 1603,<sup>4</sup> ordering that all burgesses of Newcastle praying the same should be admitted to the Company. Sons or apprentices of hostmen were to pay for admission 33s. 4d., and any other free burgess was to pay 53s. 4d. In a supplemental decree, issued early in 1604,<sup>5</sup> it was explained that this applied only to such burgesses as should be free of some trade or mystery and should have attained the same by patrimony or apprenticeship. In this form, these provisions were embodied in a new charter granted by James I to Newcastle in March 1604.

Thus a breach in the defenses of the dominant faction was forced. In spite of the fact that these provisions were resented by the entrenched members, and "were constantly ignored or encroached upon by them,"<sup>6</sup> it became much easier to gain admission to the company. During 1604 and 1605 twenty-eight new hostmen were admitted, most of them thanks to the new admission requirements.

The effects of liberalizing the membership qualifications do not appear in any marked degree before the Civil War. As we have already seen, the big mine owners dominated the scene completely. But it is certain that this act laid the foundation for the subsequent division between the mine owners and the fitters and the transformation of the Company of Hostmen into an organization of the fitters. Forces which were already active under the surface began to have their visible effects under the impact of sharp civil conflict.

In order to understand the evolution of the hostmen after 1640 it is necessary to recall very briefly the role that Newcastle

<sup>4</sup> *Records of the Company of Hostmen*, p. 24.

<sup>5</sup> *Records of the Company of Hostmen*, p. 25.

<sup>6</sup> *Records of the Company of Hostmen*, p. xli.

played in the struggles of the middle years of the seventeenth century.<sup>7</sup>

Newcastle was occupied by the army of the Scottish Covenanters in 1640. After their evacuation, the conflict between Charles and Parliament reached an open break. Each, naturally, was very desirous of support from the northern counties and not least from Newcastle because of the great significance of controlling the fuel supply of London and the south. Temporary victory went to the king, thanks to the support of the leading hostmen, whose alliance with the Crown has already been discussed.<sup>8</sup> For the better part of three years the coal trade was virtually paralyzed. Finally, early in 1644, the Scotch, now allied with the parliamentary forces, captured Newcastle again. New sources of confusion were introduced with the vigorous prosecution of the policy of sequestering the estates of royalists. Money to pay the Scotch troops and carry on the war had to be raised, and Parliament believed in the policy of making the enemy pay. The work of seizing estates and arranging for their composition proceeded with unabated vigor until 1653. Meanwhile the Scotch had evacuated in 1647. Further disturbance to the coal trade, however, came with the first Dutch War, 1652-1654.

It scarcely needs to be emphasized that these tumultuous years profoundly shook the old order of things in Newcastle as in other parts of Great Britain. In particular the strangle hold of the old royalist dominant faction was definitely broken. Much new blood was introduced into the coal industry through the sale, doubtless at bargain prices, of "parts" in collieries belonging to delinquents.<sup>9</sup>

<sup>7</sup> I have relied chiefly on three sources: Nef, vol. II, chap. iv; Welford, *History of Newcastle*, III, 350 and following; and *Records of the Committees for Compounding, etc. with Delinquent Royalists in Durham and Northumberland*, edited and with an introduction by Welford, being Publications of the Surtees Society, vol. III (1905). For the political background, see F. C. Montague, *The History of England from the Accession of James I to the Restoration, 1603-1660* (London, 1907).

<sup>8</sup> On this, see Nef, II, 284-285. The following are some of the outstanding hostmen families which figure prominently in the *Records of the Committees for Compounding with Delinquent Royalists*: Anderson, Bowes, Carr, Clavering, Cole, Dent, Errington, Jenison, Liddell, Marley, Riddell, Selby, Shafto, Tempest. These families alone must have controlled at least half of the mining capacity of the Tyne district.

<sup>9</sup> I do not know how this could be proved, but it appears to me a most likely

Furthermore, the area of developed coal mining was expanding. Sunderland, which as late as 1608-09 shipped less than 12,000 tons as against Newcastle's 240,000, was supplying more than 130,000 in 1659-60, more than a quarter of the Tyne vend.<sup>10</sup> The expansion, however, was also taking place on the Tyne. More and more non-residents of Newcastle were becoming involved in the trade. Gardiner's attacks against the mayor and burgesses of Newcastle during the 1650's were largely undertaken on behalf of these outsiders. In no case could they join the Hostmen's Company and thus gain the right to market their own coal to the shipmasters, while the town authorities, relying on the ancient right of "foreign bought and foreign sold,"<sup>11</sup> were zealous in their efforts to see that all coal was brought to the proper places and sold through the proper channels. The pressure their competition brought to bear on the hostmen tended in a marked degree to divide the latter into factions of owners and mere dealers. It was to the interest of the former to make it as difficult as possible for the outsiders to sell their coal; while to those who owned no mines one customer was as good as the next. On the one hand, the owners complained about their brother hostmen clearing (*not* buying) unfreemen's coal. The volume of such complaints rose appreciably after 1650 and died down only when it was obvious that further protest was futile. On the other hand, if the hostmen refused to handle the coal of non-residents except as principals — and many no doubt lacked the capital to act as principals — then the non-residents would find some way to evade the regulations of the

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hypothesis. Unfortunately the *Records of the Committees for Compounding* do not reveal the disposition of estates in a sufficient number of cases to warrant any generalization. Nef notes that "after the Civil War the share of outsiders, who were not merchants of Newcastle, in financing local mining enterprise increased" (II, 23), but his explanation is hardly convincing. He says, "The general collapse of the market, and the dislocation of production in the Tyne Valley caused by the Civil War, convinced many a hostman that he stood to make more by dealing as a fitter, or middleman, who purchased coal at the staiths from unfree colliery owners, than by undertaking himself the risks of mining" (II, 23). To this I should note: (1) it is too simple an explanation of the transformation of the hostmen; (2) why were the outsiders so anxious to rush in while the local owners sold out? It is hoped that the further discussion in the text throws more light on this subject.

<sup>10</sup> Nef, vol. II, Appendix D.

<sup>11</sup> See *Records of the Company of Hostmen*, p. xxx.

Company and the town. As a result, the complaint that unfreemen were selling coal to shipmasters soon became almost as common as the complaint that hostmen were coloring and clearing unfreemen's coal.

Under pressure of the attacks by Gardiner and his backers — who, Dendy thinks, must have been wealthy coal owners and merchants outside the town of Newcastle — <sup>12</sup> the hostmen came near being forced to make formal concessions to the changed circumstances. In 1659 they were ordered to send representatives to hearings before the Committee for Preventing Abuses in Monopolies. The result was the appointment of a committee "to meet with the unfree Cole Owners of the Counties of Northumberland and Durham and to treat with them about an Accomodation for the vending of their Coles according to certain proposalls made by the Comittee for receiving complaints against monopolies, And to certifie the said Comittee of their proceedings thereupon." <sup>13</sup> Nothing came of the undertaking, however, since the restoration of Charles II in the spring of the following year put a quietus on movements of reform.

What was happening during the last half of the seventeenth century seems clear. On the one hand, the hostmen were gaining the right to deal in and ship any coal they chose on what terms they chose.<sup>14</sup> On the other hand, the usefulness of the Company to the mine owners was gradually diminishing. They were coming to play a less active role in the Company, to recognize that their interests were really the same as those of the unfree mine owners, and to constitute themselves as a distinct group in the coal trade.

Symptoms of the last-named tendencies are, of course, difficult to cite, since it was not until the 1720's that any formal arrangements were entered into by the coal owners as such. But a glimpse

<sup>12</sup> *Records of the Company of Hostmen*, p. xxxiv.

<sup>13</sup> *Records of the Company of Hostmen*, p. 117.

<sup>14</sup> Naturally they did not become less anxious to have a monopoly of this right. Hence complaints against unfreemen and seizures of their coal did not become less frequent. What *did* become less frequent was complaints against hostmen for coloring unfreemen's coal. In the extracts from the Company's books selected by Dendy, for example, the last recorded complaint on the latter score came in 1701; while no less than ten cases of seizure are reported after that date.



of what was going on is afforded by certain temporary agreements which were necessitated by the disturbance to the shipping trade incident to the second Dutch War (1665-67).

During the war, coal tended to pile up at the pits and on the staiths to an extent far greater than normal. The obvious remedy was to close down the mines until the excessive inventories could be moved, but no one cared to take this course unless he was sure his competitors would do likewise. Accordingly, in both of the years 1665 and 1666 agreements were concluded not to mine any more coal, in one case until the existing stock should be exhausted, in the other for three months.

In substance these two agreements are almost identical. The difference between them, however, is striking. That for 1665 was reached "at a meeting of several of the principal traders in coals" and was signed by twenty-three men, each on behalf of his own colliery.<sup>15</sup> All of these twenty-three were hostmen, but no mention of the affair appears in the Company's books. The following year, however, the agreement is in the form of a regular order by the Governor, Stewards, and Company of Hostmen.<sup>16</sup>

We can only guess at the reason for this difference. Perhaps there was dissent on the part of the non-owning hostmen in 1665; or, what seems more likely, perhaps the owners took the initiative in 1665 and, when the policy proved to be successful, were readily followed by the whole group in the following year. At any rate it seems clear that by the 1660's the coal owners were sufficiently differentiated from the rest of the hostmen to be able, when the occasion demanded, to act as an independent body; while it is equally plain that they had not yet entirely abandoned the Company to the fitters.

<sup>15</sup> Bell Collection, vol. VII, p. 9. For particulars of this collection, see bibliography.

<sup>16</sup> *Records of the Company of Hostmen*, p. 131.

## CHAPTER IV

### THE GRAND ALLIES

VERY little information concerning the organization of competition in the Tyne trade during the last half of the seventeenth century and the first two decades of the eighteenth has survived. The consequence is, of course, that what analysis has been attempted has rested on very shaky foundations.

It has been argued by no less an authority than Professor Nef that the transformation of the Company of Hostmen into what was in effect an association of fitters did not impair the control which the Company exercised over the coal trade of the Tyne Valley.<sup>1</sup> According to this view, the separation of the colliery owners from the fitters had the effect of putting the former in a position subordinate to the latter. If this were so, it would represent a complete reversal of the relationship which had existed prior to the Civil War. The supporting evidence rests partly on the fact that in the years around 1700 certain of the fitters entered into agreements with the first buyers of coal in London for securing a ready sale and for sharing rebates, or premiums. These rebates or premiums were no new phenomena; and, as Nef himself recognizes, the only essentially new element was the participation of the London buyers. In earlier times the shippers had been the recipients, but their position was much weakened by excess capacity and severe depression in the shipping industry. There is, however, nothing in this to indicate that "the power of the fitters was strengthened because a small group were now united in a common policy concerning the purchase of coal."<sup>2</sup> And, as we shall see, the independent evidence offered in support of this assertion is really no support at all.

There is, as a matter of fact, good reason to think that the

<sup>1</sup> Nef, II, 132-133. This view appears to be accepted by Dendy, too. He says, "The coal trade had then [1738] come into the hands of the fitters . . ." (*Records of the Company of Hostmen*, p. xlv).

<sup>2</sup> Nef, II, 98.

sharing of premiums with the London buyers was the result of serious rifts in the ranks of the hostmen and was not pursued as a policy by any large group of them. Nor were the owners without a finger in this pie. In 1703, "a peticon and complaint" was made by "divers of the company" against six of the brethren "for aideing and assisting gentlemen owners of coles not free of this Society who confederate with the lightermen and buyers of Coles in the Citty of London to the ruine and preiudice of the hoastmen and coale trade in Newcastle."<sup>3</sup> So important was the matter considered, that a committee was appointed to look into it, and a long report was prepared. The upshot was that all relations with the London buyers were outlawed, under penalty of heavy fines or disfranchisement.<sup>4</sup>

It is unlikely, however, that the view that the fitters had come into the dominant position in the trade would have gained currency had it not been for the discovery by Dendy of a secret agreement in the year 1738, "that the Fitters' vends be proportioned every month, and those found to exceed to cease vending, till such who are short have vended up, so that each Brother have his proportion of the vend, the first week after every month if possible."<sup>5</sup> On the basis of this agreement, Nef concludes: "At the beginning of the eighteenth century we find the principal hostmen uniting in fitters' vends, which depended for success upon a monopoly of keels. Like the London coal rings, these vends were more successful than mine owners' agreements to limit output."<sup>6</sup> A careful examination of this agreement, however, would have dictated caution. The fifth article reads as follows: "That when any Brother has given reasonable cause of suspicion of having transgressed any rule established for the good of the Company, *he shall go to the next meeting of the coal owners and there swear an answer to the charge against him*, two of the Company being present."<sup>7</sup>

<sup>3</sup> *Records of the Company of Hostmen*, p. 160.

<sup>4</sup> *Records of the Company of Hostmen*, p. 161. Nef cites this order, but makes no attempt to reconcile it with his interpretation of the fitters' position in the trade.

<sup>5</sup> *Records of the Company of Hostmen*, p. 194. This entry, and subsequent items bearing on the subject, were recorded in a small exercise book — doubtless to avoid coming into conflict with the Act of 1710.

<sup>6</sup> Nef, II, 131-132.

<sup>7</sup> *Records of the Company of Hostmen*, p. 194. The italics are mine.

In the italicized clause, the true relation between the fitters and the owners is clearly hinted at. The fact is that at this time the owners were in complete control. The fitters' agreement was a mere adjunct to a much more comprehensive one entered into by the great colliery proprietors of the district. We shall have to demonstrate carefully the truth of this statement, since it is so contradictory to what the best authorities have hitherto held.

In 1710 Parliament passed "An Act to dissolve the present, and prevent the future Combination of Coal-Owners, Lightermen, Masters of Ships, and others, to advance the price of Coals."<sup>8</sup> It is worth noticing that fitters are nowhere mentioned and that the highest penalty for violating the act is imposed upon owners. Whether this is to be taken as evidence that the owners at that time had some sort of agreement is difficult to say; probably the Act's main objective was the organization of the trade in London.

At any rate a militant combination of the largest owners grew up soon afterward. The so-called Grand Alliance was brought into existence by a "Quadrupartite Agreement," dated June 27, 1726, "Between the Honorable Sydney Wortley Esq., Sir Henry Liddell Bart., Geo. Bowes Esq., and others."<sup>9</sup> The agreement is a long and wordy document replete with legal phraseology. Its intent, however, is clear. The various signatory parties were joining hands to prevent the opening of new collieries by buying up land, royalties, and wayleaves. Any coal property which they could not directly get hold of they proposed to block off from an outlet to the river.

It is more than likely that it was also part of the Grand Allies' original intention to regulate output and prices. In their account book<sup>10</sup> occurs an entry, some time between October 1727 and January 1728, entitled, "A Computacon of Quantities for a General Regulacon" followed by a list of all the important sea-sale

<sup>8</sup> 9 Anne, c. 28, made perpetual in 1728 by 1 Geo. I, c. 26.

<sup>9</sup> A manuscript copy of this agreement is contained in the collection of the North of England Institute of Mining and Mechanical Engineers, Newcastle, hereafter referred to as the Institute.

<sup>10</sup> This is a small notebook in the collection of the Institute; it contains entries at irregular intervals from 1727 to 1738. Probably only a small number of the transactions of the Grand Allies were recorded in this book even for the period covered by it.

collieries, each with its proposed quota. Then come two items which throw much light on the aims and methods of the Grand Allies.

First, "If ye two Rivers Come into a Regulacon ye River Wear will be Glad to accept of 11,000 Tens."<sup>11</sup> This is surely the first mention of a joint regulation including both the Tyne and the Wear, though there seems to be no evidence that one was actually concluded before 1771. The ambitious character of the Grand Allies' plans can be gathered from this fact.

Second, "If an Agreement should be made whether Generall with ye other River to allow ym a certain Quantity or if only with Lady Claverlinge and Mr. Ridley Care should be taken yt none of ye collieries following fall into ye hands of any other Coal Owners." "Collieries" here evidently means lands in which collieries might be sunk, for a lengthy discussion as to how some of them could

TABLE 1

Coal Owners quantities agreed upon for the year 1733, 301,000 chaldrons.<sup>a</sup>

	<i>Proportions</i>	<i>Chalders</i>
Sir Henry Liddell Bart. ....	} Grand Allies	80,000
Edward Wortley Esq. & ptns. ....		54,000
George Bowes Esq. ....		44,000
Lady Claverlinge .....		22,000
George Pitt Esq. ....		17,000
Rich <sup>d</sup> Ridley Esq. ....		46,000
Fra. Rudston Esq. ....		14,000
Mr. White .....		8,000
Messrs. Simpsons .....		6,000
Felling .....		10,000
		<hr/> 301,000

<sup>a</sup> Entry in the manuscript account book mentioned in note 9.

be won is appended. This shows a keen appreciation of the relation between price-output control and entry to the industry, an appreciation which was conspicuously lacking at a later date.<sup>12</sup>

It is not clear when a regulation was actually put into operation, but the undated entry given in Table 1 proves that a regulation

<sup>11</sup> A "ten" was ten Newcastle chaldrons of 53 cwt. each. A London chaldron was approximately half of a Newcastle chaldron. See Nef, vol. II, Appendix C.

<sup>12</sup> See below, Chapter X.

was in force by 1733. In a further table each one of these quotas is divided up among the fitters, showing precisely how much each fitter was to be permitted to vend. Probably it was discovered by experience that it was better to allow the fitters to decide this for themselves. This is by far the most plausible explanation of the fitters' vend of 1738. Far from indicating the supremacy of the fitters in the trade, as Nef was led to believe, the very existence of such an agreement was a sign that the coal owners had come to an understanding among themselves.

Let us examine a little more closely the table of quotas presented above. The picture of the Tyne trade implicit in these figures is really quite startling. First, it is evident that all the important Tyne collieries are included, since the allotted quantity of 301,000 chaldrons exceeded the actual shipment of the year 1733 by some 10,000 chaldrons.<sup>13</sup> Second, the Grand Allies by themselves controlled 60 per cent of the total output; while the Grand Allies plus their two largest competitors disposed of slightly more than four fifths of the total. The tendency towards a concentration of control over the coal mines of the Tyne area, noted by Nef as proceeding during the seventeenth century, seems to have reached its conclusion under the Grand Allies. At no time before or since have the mines been so closely held or the trade so completely dominated by a small group of owners.

What part these owners played in the Hostmen's Company is not plain. Most of them retained their membership; of the foregoing list for 1733 all but Wortley and Pitt were hostmen<sup>14</sup> and it seems likely that these two were not inhabitants of Newcastle. The name of Wortley seems not to have been connected with the region much before this time, but efforts to trace the origin of the Wortley family's interest in coal and their sudden rise to a posi-

<sup>13</sup> Exports from the Tyne were 291,000 chaldrons in 1733 (T. S. Ashton and Joseph Sykes, *The Coal Industry of the Eighteenth Century*, 1929, p. 250). It is reasonable to assume that land sales were not included in the regulated quantities since this was the case in all regulations, both earlier and later, where the matter was mentioned at all.

<sup>14</sup> See the membership list, *Records of the Company of Hostmen*, pp. 266-284. Lady Clavering was doubtless the widow of a hostman.

tion second only to that of the Liddells have yielded meager results.<sup>15</sup>

This is the extent of the absolutely trustworthy evidence on the regulations engineered by the Grand Allies. But the comment of a contemporary pamphleteer adds some interesting sidelights, and, in view of what is known to be true, has all the earmarks of trustworthiness.<sup>16</sup>

This writer traced all the abuses in the coal trade to

certain monopolizers, commonly distinguished in the north by the name of the Grand Allies, . . . who have engrossed into their hands great numbers of collieries, which they take on lease and work, reserving great parts of those on their own estates for futurity. . . . To the owners of a number of other coal mines, from whence much more than half the usual vend would be supplied, did not their practices prevent, they pay annual considerations for letting their mines lie unwrought. . . . They have got into their possession by one means or other, so large a share of all the lands adjoining to the River Tyne, that

<sup>15</sup> The Wortleys in question were probably a branch of the well-known Yorkshire family of that name, but I have not at my disposal the material necessary to prove the connection.

Sir Francis Wortley, second baronet of that name, died without legitimate issue and left his estates to his natural daughter, Anne Newcomen, on condition that her husband take the name Wortley. Anne married Sidney Montagu, second son of the first Earl of Sandwich (patron of Pepys), who prudently took the name Wortley. Their children, Anne, Katherine, and Edward, were known indifferently as Montagu, Wortley, or more commonly Wortley Montagu. Edward married Mary Pierrepont who became famous as Lady Mary Wortley Montague.

Now Sidney Wortley died on November 18, 1727, and was succeeded by his son Edward. The fact that the Quadrupartite Agreement establishing the Grand Alliance was signed in 1726 by Sidney Wortley, and the quota for 1733 was assigned to Edward Wortley certainly suggests that the two sets of Wortleys were in fact identical. I think this is very likely but have not been able to find a scrap of evidence—particularly in the voluminous literature on Lady Mary—relating the family to Newcastle or the coal trade. It would be interesting to know the correct story as well as the manner in which the Wortleys rose so quickly to the top in the Newcastle trade.

<sup>16</sup> The pamphlet referred to is extensively quoted and drawn upon by a later writer, Anti-Monopolist, in his very useful *Remarks on the Present State of the Coal Trade, with a Retrospective Glance at its History* (1843). My quotations are from the latter work, pp. 9-11.

Ashton and Sykes, *The Coal Industry*, p. 212, quote a sentence or two from a pamphlet of 1739 entitled *An Enquiry into the Reasons of the Advance of the Price of Coals*. Since these sentences agree verbatim with part of Anti-Monopolist's excerpt, I have no doubt that the two are in fact identical. I was unable, however, to locate the pamphlet either in London or in Newcastle.

Neither Ashton and Sykes nor Anti-Monopolist has any information about the author save the latter's statement (p. 9) that he was "writing in 1739 to the Lord Mayor of London for that year, one Micajah Perry, to wit."

they have almost totally debarred all other persons from access to it with coals, especially on the south side, where the best coals lie. . . . Great numbers of wayleaves the Grand Allies have engrossed into their own hands, and pay dead rents for many of them not to use them, but to exclude every body else. So that it is now no easy matter to find an unwrought colliery, which one or other of them has not effectually stopped up the way to.

It seems that the Grand Allies had long been trying to sell mixed coal as best coal with the result that their product lost favor with buyers, giving their rivals an advantage. The Allies then turned on their rivals and attempted to dictate terms to them. On being met with a refusal, they dropped their selling price from 12s. to 9s. 6d. and even 9s. per chaldron. This ruthless competition had the desired effect. Now let our author continue with the story:

At length, about the beginning of the year 1732, they brought all the coal-owners that were considerable to terms, and an accommodation was settled amongst them; in consequence of which coals were raised again immediately to 12s., and so continued for some time. During this time, the measure of coals was gradually shortened a sixteenth part or more. In the year 1736 they thought fit to raise them to 13s., and also to rid themselves of a charge of about 12d. per chaldron; which, whether they are willing to own it or not, they had for a great number of years, voluntarily paid to the dealer here [i.e., in London].

Whether the agreement made in or about the year 1732 was, at that time, reduced to writing or barely verbal, I am no ways able to say; but that something of this nature was put in writing, and signed by certain gentlemen or their agents, about October, 1737, is, I believe, too notorious to be denied.

What the terms of this private accommodation were, is not, nor perhaps ever will be, publicly known; for common prudence in a case of this nature, dictates secrecy. However a multitude of strong circumstances, as well as the common report in all those parts (which I never heard contradicted) concur to prove that they have, in some shape or other, stipulated the particular quantities which each owner shall vend: for it is well known that, whenever the better sorts, which have a quick vend, have got beforehand with their quantity their carriages have been laid off, and their delivery of coals entirely stopped for several days, if not weeks together, without any other apparent reason than to give room to the owners of the inferior sorts to force off their share.<sup>27</sup>

<sup>27</sup> It is interesting to note in connection with this account that on April 27, 1738, a petition to the House of Commons was presented by the Lord Mayor, Alderman, and Commons of London. It expressed an apprehension arising "from a late advance of the price of coal and from the masters of ships delivering in turn and other proceedings, that there is at present a combination to keep and advance the price of coal . . ." (cited by H. B. Dale, *The Fellowship of Woodmongers — Six Centuries of the London Coal Trade*, undated, p. 145).



There is no way of knowing how long regulations of this type, dominated by the Grand Allies, continued to operate. Anti-Monopolist was of the opinion that the opening of new collieries on the Wear, over which the Allies had no control, caused the agreement to break up. This may be; but, since, as will be presently demonstrated, a very similar regulation existed during the 1740's, it seems more reasonable to assume that there was no serious interruption in the continuity of the regulation. There were doubtless years of unregulated trade, but that was true of a later period too.

As to the Grand Allies, they had to abandon their efforts to prevent the influx of new collieries. But the partnership itself survived a long time. As late as 1800, several of the leases which had been taken up by the original Grand Allies were still in the joint possession of their descendants, and the name "Grand Allies" still stuck fast.<sup>18</sup>

The last regulation before 1771 of which we have a definite record covered the period 1746-1749. As remarked above, the probability is that this was in essence a continuation of the Grand Allies' regulations of the 1730's, though we do not know whether the Allies were the leading spirits. Before we examine this "contract," as it was called, it will not be out of place to say a word about the evidence on which our knowledge is based.

In the collection of the Newcastle Institute is a manuscript volume entitled "Letter Book, 1749-56," containing correspondence between William Brown, of Throckley, and Carlisle Spedding, of Whitehaven, two of the most eminent colliery engineers of their day. Brown was responsible for very important improvements in steam pumping machinery without which the deeper mining of the last half of the eighteenth century would hardly have been possible; while Spedding is best known as the inventor of the so-called steel mill.<sup>19</sup>

<sup>18</sup> See the List of Collieries, Lessees and Viewers on the Blyth, Tyne and Wear, compiled by Mr. T. V. Simpson, and presented in a paper entitled "Old Mining Records and Plans," *Transactions of the Institute of Mining Engineers*, vol. LXXXI, part I, pp. 75-108.

<sup>19</sup> The steel mill was a device for producing light by a shower of sparks. It was used in gassy mines and was for years considered proof against explosions. A series

Much of this correspondence is taken up with discussion of technical problems of current interest, but Brown, at least, was sufficiently interested in the business side of the trade to devote the greater part of one long letter and less of others to explaining the situation to Spedding. The relevant passage from the long letter deserves quotation *in extenso*:

Throckley, 13th of Jan'y, 1749.

Dear Sr:

. . . To the situation of affairs in our part of the world the most material at present is whither or no the contract as it is term<sup>d</sup> with us subsists any longer than this period of time or not, to explain what I mean by contract it is thus it is a sort of regulation or agreement entered into by most and the powerfull gentlemen in the coale trade by which they oblige themselves not to sell their coales under such prices as is therein mentioned; and also that they are not to exceed the vend of a certain quantity as also that they take their turns as to vend alternately one after another and to vend a certain quantity each turn till the year determines [i.e., ends]; and in case one or more gentlemen has vended the quantity assign'd him considerable time before the year determines he or they may by no means vend more that season but must throw his or their dealers upon such of the gentlemen concerned as is short and has not vended the quantity assign'd them. This is what we term the contract and has been the three years past, involiably and justly observ<sup>d</sup>, notwithstanding the express acts [of Parliament ?] to the contrary and what is more there is no obligation in force to oblige them to it more than their word and promises one to another and the stronger obligation (viz.) self interest for by this regulation their is as much profit arrises at the vending ten thousand chalders as their is at thirty when their is a fighting trade; for when that is the case one owner undersells another so that some sells cheaper than they work and then the shipmasters makes a fine time out [one illegible word follows here]. Their has been two meetings of the gentlemen in order to settle the said regulation for three years more but has not yet agreed. Mr. Humble of Newcastle is ye only person that will not come into such measures relying on the great quantity that he works but at present his affairs does not look with a good face. . . .

Structurally this regulation appears to differ very little from earlier ones. Brown's evidence is very interesting as to the scrupulousness with which the agreement had been observed and as to its very profitable nature. In commenting on the latter Brown incidentally revealed the underlying force which compelled the

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of terrible disasters in the course of winning the famous Wallsend colliery in the Tyne basin during the 1780's proved that the steel mill was by no means so safe as had been thought. Thereafter it gradually went out of use. See R. L. Galloway, *Annals of Coal Mining and the Coal Trade*, I (1898), 290-294.

northern coal owners to attempt a conscious regulation of their industry, namely, cutthroat competition. Favored geographical location, severely limiting as it did the extent of potential new capacity and guaranteeing a steady market, was the factor which fundamentally determined the large measure of success which attended their efforts at regulation.

In subsequent letters, Brown tells of the breakdown of negotiations for a new regulation and pictures the disastrous results of a "fighting trade." By July 12, 1850, prices, which under the limitation had been about 13s. per chaldron, had been slashed to 5s. per chaldron. Trade had never been worse, but it was believed that the owners "would soon come to a new regulation."

This hope did not materialize; for a year later (July 10, 1751) we find Brown reporting that "the coal trade in our river is still at a very low ebb and as yet there is no likelihood of any regulation to amend it." But better times were in store, even if a settlement could not be reached. In the autumn of 1751 demand picked up, and on November 2, Brown wrote in considerably better humor: ". . . Though we have still a fighting trade in our river the coals is so scarce that its thought they will be at the old price (viz.) 13s. per chaldre this winter." And again in January and March of 1752 he reported that coal was selling at 13s. to 14s.

Prosperity apparently took the minds of the owners off the problem of regulation and directed their attention to producing coal, for we hear no more of restriction of any kind in the rest of Brown's letters to Spedding.

This is, of course, natural enough. Whenever an industry is expanding rapidly and existing plant is being used continuously at capacity level there is nothing to be feared from cutthroat competition. There is no need for regulating quantities produced, and the incentive to add a little something to profits by pushing prices even higher than they are may be weak and easily overbalanced by the trouble involved. Such a period began for the Newcastle coal trade in the autumn of 1751, and, as we shall see in the next chapter, there is good reason to believe that it lasted, substantially without interruption, right down to 1771.

## CHAPTER V

### THE LIMITATION OF 1771

THERE is no evidence to show that a regulation existed during the years 1750-1771.<sup>1</sup> Possibly this is simply because the evidence has not yet been discovered. But there are a number of reasons for believing that these years were on the whole free of regulation.

In the first place there can be no doubt whatever that the coal industry experienced a period of rapid expansion between 1750 and 1770. Coal imported into London jumped from 458,000 London chaldrons in the former year to 613,000 in the latter, and then climbed up to a momentary peak of 711,000 in 1772; whereas from 1720 to 1750 it had remained substantially stable.<sup>2</sup> At the same time the trend of prices was definitely upwards. Taking the mean price from 1720 to 1744 as base, the price relative for 1750 was 95.3 and for 1770 it was 120.<sup>3</sup> As argued in the last chapter, these facts alone would lead us to expect a general freedom from regulation.

The second reason for questioning the existence of regulations in this period is the fact that Francis Thompson, a witness before the parliamentary committee appointed in 1800 to investigate the coal trade, testified that he had been connected with the trade since 1755 and had known of no regulation prior to 1771.<sup>4</sup>

<sup>1</sup> Ashton and Sykes, *The Coal Industry*, p. 212, say, "In 1765 there is definite proof of an agreement to regulate sales." Their reference is "Rept. of Coal Comm. (1871), iii. App. 3." But on examination the appendix cited turns out to be concerned with the vend of coals from the Wear in 1779. Nor can I find any hint of a regulation in 1765 anywhere else in the Reports of 1871. One is tempted to believe that Ashton and Sykes have confused 1765 with 1665. The regulation in 1665 (see p. 21 above) is given considerable space in the "Report of Committee E," 1871. This report is the third and last volume of the *Report of the Commissioners Appointed to Inquire into the Several Matters Relating to Coal in the United Kingdom*, Reports from Commissioners, 1871, vol. XVIII.

<sup>2</sup> Practically the whole amount, of course, came from the Tyne and Wear. The figures are official customs-house returns. Ashton and Sykes, *The Coal Industry*, p. 249, give a convenient summary up to 1800.

<sup>3</sup> Price History Data. On the period 1750-70, see also the argument advanced on p. 144, below.

<sup>4</sup> *Report from the Committee Appointed to Consider of the Coal Trade of this*

And finally there exists a second letter book of William Brown for the year 1765 in which no mention is made of regulation. In view of the interest Brown took in the matter in 1749-1751, it seems reasonable to assume that, had there been such an arrangement in 1765, he would at least have mentioned it.<sup>5</sup>

While it seems likely, therefore, that this was a period free of regulations of quantities and prices, it must not be concluded that the coal owners were acting altogether in the manner of the "pure" competitors of equilibrium economic theory. On the contrary, it is in these years that we first hear of concerted action of the owners *vis-à-vis* their workers, an aspect of later combinations, which played an important and sometimes even a determining role.<sup>6</sup> By 1765 the rapid expansion which the coal trade had been experiencing began to make itself felt in a shortage of labor and a tendency on the part of employers to compete with each other by raising the "binding money."<sup>7</sup> Late in 1764 meetings of coal owners were held to decide upon ways and means of abating this competition and reducing what was considered the existing "extravagant" binding money.<sup>8</sup> The result was that the coal owners

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*Kingdom*, Reports of Committees, 1785-1802, vol. X, pp. 541-542. Of course Thompson's memory may have been at fault, but in the absence of any evidence to the contrary, I think we are justified in accepting his word. Levy puts forward this argument as indicating the unlikelihood of any regulations after about 1727 (Hermann Levy, *Monopoly and Competition*, 1911, p. 107), but this, as we now know, was going much too far.

<sup>5</sup> There is a great deal more documentary material in the way of letter books, account books, and so-called view books in the collection of the Institute (see Bibliography); and a thorough examination might settle the question once for all.

<sup>6</sup> I have not the slightest doubt that combinations of the employers against their workers go back much further. In the absence of specific evidence, however, not much can be said about the subject, except that the binding system characteristic of the northern coal field implies some sort of agreement among the employer as to the terms of the bonds. The bonds were annual contracts entered into by the workers, defining terms of work, rates of pay, etc., and were enforceable at law. The system had ancient origins, and in the Durham-Northumberland coal district it survived until the great strike of 1844, longer than in any other part of the British Isles. We shall have occasion to consider the terms of some of these bonds and the disputes which arose over them later on. On the whole question, see the excellent discussion in Ashton and Sykes, *The Coal Industry*, chap. vi.

<sup>7</sup> "Binding money" was a sum paid to the miners on the occasion of the annual signing of the bond. See Ashton and Sykes, *The Coal Industry*, pp. 86-94.

<sup>8</sup> "You have doubtless heard of sundry meetings of the Gentlemen in the coal trade in the rivers Wear and Tyne in order to reduce the extravagant binding money . . ." (William Brown to M. Ridley, Jan. 7, 1765, Letter Book, 1765).

decided upon two measures: (1) to force the miners to continue working under the existing bonds for three months after they expired in August 1765; and (2) not to hire any man who could not produce a certificate of leave from his last employer.

On August 14 the miners gave their answer in the form of an almost completely effective strike. On August 31 the owners gave way on the main issue, offering certificates of discharge on the expiration of existing contracts. But by this time the miners had raised their demands to include wage increases and immediate cancellation of existing contracts. Violence and the dispatch of troops from York ensued. Subsequent developments are not known, but by October work had generally been resumed; apparently the miners had lost on the wage question but had been victorious on the other counts.<sup>9</sup>

From this time on most combinations on the part of the coal owners had two aspects, namely, to present a united front to the consumers of coal, and to the miners of coal. Sometimes the united front against the consumers broke down, and at times serious breaches in the united front against the miners threatened; while on several important occasions the maintenance of the two simultaneously involved a contradiction which even the resolute coal owners could not solve.

The year 1771 has long been regarded as a turning point in the history of the coal trade. This is due in large part to the accidental nature of our sources of information. It happened that the Committee on the Coal Trade in 1800 gathered evidence extending back thus far and established to its own satisfaction that the so-called "Limitation of the Vend" began in that year. As we have already seen, a more accurate account would be to say that in the year 1771 a regulation was resumed after an interruption rather longer than usual. Certainly there was nothing new in the principle of limiting quantities and holding up prices through collective action.

But there are more important reasons for regarding, not necessarily the year 1771, but the years round about, as significant in

<sup>9</sup> Ashton and Sykes, *The Coal Industry*, pp. 89-91. Also, M. A. Richardson, *The Local Historian's Table Book*, Historical Division, II (1843), 137.

the history of the coal trade; and these in turn will help us to understand why the regulation was revived at this time.

As has already been pointed out, the demand for coal was expanding during the years following 1750. Supply was also expanding, but not rapidly enough to prevent prices from showing a steady upward trend. This was naturally an inducement to expand productive capacity, while recent technical improvements, such as those effected by Brown, made possible the opening of hitherto unworkable seams.

This process was going on in a more marked degree on the Wear than on the Tyne. Exports from the Wear increased by about 95,000 Newcastle chaldrons, or 53 per cent, between 1750 and the peak year 1772, while exports from the Tyne increased by 64,000 or just over 22 per cent.<sup>10</sup> But important developments were taking place on the Tyne, too. The improvement in steam pumping machinery, making possible deeper sinkings, led to the opening during the 1760's of the famous High Main seam in the Tyne basin. Walker colliery was the only one below Newcastle producing best coals in 1772, but it was not long to remain so. Willington followed in 1775, while Wallsend and Bigge's Main commenced working during the early eighties.<sup>11</sup>

The efforts of the upper Tyne owners to improve their product to compete successfully with the new collieries on the Wear and lower Tyne led them to adopt the method of screening their coal.<sup>12</sup> This tended, of course, to increase the supply of the best coals.

It seems reasonable to assume that by the end of the 1760's the expansion in productive capacity had rather overshot the mark, for complaints of excessive competition began to be heard from various quarters,<sup>13</sup> and the coal owners seemed ready for a somewhat more comfortable arrangement.

It was at this time that Francis Thompson, manager of Wash-

<sup>10</sup> Ashton and Sykes, *The Coal Industry*, p. 250.

<sup>11</sup> Galloway, *Annals*, I, 290-294.

<sup>12</sup> In 1766, according to Ashton and Sykes, p. 194. Screening was described by an experienced observer in 1817 as "a practice so blameable that nothing can justify it except the plea of self-preservation." The small coal which passed through the screen was largely wasted. (Robert Edington, *A Treatise on the Abuses of the Coal Trade*, 2nd ed., 1817, p. 4.)

<sup>13</sup> See Edington, *Treatise*, pp. 4 and following.

ington, one of the new Wear collieries, proposed a regulation. Here is his own account of what happened, as told to the Committee of 1800:

"In August, September, and October 1771, I found great irregularities in the coal trade, particularly with respect to measure. I communicated my sentiments on that head to two of the most respectable agents for the owners, and we said it was a pity but the coalowners had a meeting to regulate those abuses; for it appeared to me that the owners of the Washington coals, where I was, had expended near £15,000 and had very small returns; and I thought it highly expedient that a certain price should be fixed; upon which it was agreed that a meeting should be had of the Coal Owners belonging to Sunderland . . . and Newcastle, which was done; and we had three or four meetings and I was appointed secretary. At one of those meetings the prices were fixed, some at 12s., some at 13s., 14s. and 15s. per Newcastle chaldron. . . ." <sup>14</sup>

It is impossible to tell from Thompson's story just when the regulation became effective — certainly not until sometime in 1772, and probably not until 1773. The exports from the Tyne and Wear in 1772 were higher than in any preceding year, reaching a level not again attained until 1784;<sup>15</sup> while prices paid by the Greenwich Hospital did not turn up until as late as 1774.<sup>16</sup>

<sup>14</sup> *Report . . . of the Coal Trade*, 1800, p. 541.

<sup>15</sup> Ashton and Sykes, *The Coal Industry*, p. 250.

<sup>16</sup> Price History Data.



## CHAPTER VI

### PRELIMINARY OUTLINE, 1771-1845

So much then for the condition of the trade around 1770 and the origins of the new regulation. The next task is to outline the subsequent history of the Limitation of the Vend, down to its dissolution in 1845. In doing this it is possible to reserve for later and separate treatment the terms of the various agreements which were entered into from time to time, the methods by which they were enforced, the policy pursued under them, their effect on prices and output, etc., as well as any tentative generalizations of a broader nature. This is possible because the basic principle of all monopolistic combinations, namely limitation of quantity and maintenance of price, persisted throughout and provides a sufficient basis for the purposes of an historical survey.

A few general characteristics of the period under consideration should be noted and kept in mind in reading what follows. First, of course, the advance of industry, the steady increase in population, and the growing urbanization of the country made it inevitable that the outstanding feature of coal quantity series should be an upward trend. There is nothing in the nature of a combination which would tend to offset this trend.<sup>1</sup> There is, however, no reason to suppose that the "trend forces" worked evenly or even continuously.

Second, this period, 1771-1845, was a very much "troubled" period in the sense that wars and internal disturbances, sometimes amounting almost to revolution, were rather the rule than the exception. There were the American war of independence, the Napoleonic wars, the social unrest following the latter, the reform movement culminating in 1832, and finally the first great working-class movement, Chartism. The effect of war on the coal trade was double: it affected coal along with other industries and it dis-

<sup>1</sup> I mention this especially because Ashton and Sykes appear to hold a contrary view. Thus they judge the effects of the regulation at one time by reference to figures of the previous decade. See *The Coal Industry*, pp. 213-216.

rupted the carrying part of the trade. Shipping was endangered, vessels were taken over for war service, and sailors were impressed into the navy. There is nothing abnormal about such occurrences; on the contrary, in considering any considerable time span in the life of capitalism they must be regarded as thoroughly normal. But their influence is impossible to isolate and remove; the best that can be done is to make crude, commonsense allowances which cannot possibly be put to the test of accuracy.

Third, this was the period of the "rationalization" of the relations between government and industry. Outworn regulations, customs barriers, and the like, were abandoned; "stupid" taxes were replaced by "sensible" ones. Free trade was the slogan of the day, and to a considerable extent it was put into practice.<sup>2</sup> This was peculiarly the case with respect to the coal trade. An easy commodity to tax, coal was long the object of heavy and discriminatory taxation. The government tax on sea-borne coal for British consumption was changed no less than eight times between the early 1770's and its final abolition in 1831,<sup>3</sup> not to mention changes in local dues, charges, etc.

The London coal market went on accumulating regulations and prohibitions until by 1830 it was a veritable Augean stable of fraud and abuse. The Committees of 1829 and 1830, along with the Act of 1831,<sup>4</sup> performed the Herculean labor of clearing it out. All these things had their effect on the course of development of the coal trade.

The agreement whereby quantities and prices were regulated was usually renewed annually. It was a rare year in which some contention did not take place over the quotas which the various owners were to receive. Sometimes this jockeying for position went on for months on end with a makeshift regulation in force

<sup>2</sup> One should not, as is too often done, confuse "free trade" with "free competition" in the sense in which this latter expression is used in economic literature. The fact that both tended to predominate at the same time is precisely a problem demanding explanation.

<sup>3</sup> In the following years: upwards — 1779, 1782, 1787, 1797, 1803; downwards — 1815, 1824. The duty at London was 8s. per bare London chaldron before 1779 and rose to a peak of 12s. 6d. in 1809. See Ashton and Sykes, *The Coal Industry*, Appendix D.

<sup>4</sup> 1 and 2 Will. IV, c. 76.

in the meantime; and not infrequently it led to a temporary breakdown of all regulation. Even when this happened, however, it was usual for the representatives of the owners to continue negotiations for a new agreement; and, under these circumstances, the evil effects of incipient cutthroat competition acted as a spur to redouble their efforts. On the few occasions when the trade really suffered from a prolonged period of competition, so-called years of "fighting" trade, the trouble seems to have been more deep-seated than mere desire on the part of the various owners to increase their quotas at the expense of their fellows. We shall examine two of these occasions later; for the moment it is sufficient to emphasize that the regulation was constantly being formed, allowed to lapse, and reformed.<sup>5</sup>

It has not been possible to gather complete data on the number of years in which there was no regulation; sometimes the evidence is conflicting. For the period 1771-1800, T. John Taylor, writing in 1846, says: "In a document which is lying before me I find that the trade was under regulation in the years 1777-78-79-80-81; not under regulation in 1782-83-84-85-86-87-88; again under regulation in 1789-90-91-92; not regulated in 1793-94-95; but again regulated in 1796-97-98-99; and open in 1800."<sup>6</sup>

There is no way of telling how long the agreement initiated by Thompson in 1771 lasted. Taylor's figures suggest that it must have lapsed sometime before 1777, but the latter are surely wrong, at least for the years 1787 and 1788, for which there is ample evi-

<sup>5</sup> Once when the agreement temporarily lapsed a handbill was circulated in Newcastle celebrating its demise. In this bill the intermittent character of the regulation was stressed to the point of exaggeration. It is headed: "GREAT NEWS! GREAT NEWS! A full, true, and Particular Account of the Life, Character, and Death of the Monster, the *Limitation Coal Vend*, that Expired, near the Vicar's Pump, Westgate Street, Newcastle-upon-Tyne, on Monday, Jan. 19th, 1829." The bill recounts how the monster is supposed to be nearly one hundred years old, and how he has been subject to trances ever since his birth, remaining awake for two or three years at a time and sleeping for one or two. (Bell Collection, VIII, 56-57.)

<sup>6</sup> T. John Taylor, *Observations, Addressed to the Coal Owners of Northumberland and Durham on the Coal Trade of those Counties* (1846), p. 11. Taylor was himself a coal owner with an intimate knowledge of the trade. His pamphlet is altogether the keenest thing that has been written on the regulations. It is, as its name implies, addressed to the coal owners and is concerned with convincing them of the necessity of a regulation; consequently it is almost entirely free of the special pleading which characterizes most of the contemporary literature on the subject.

dence that a regulation existed.<sup>7</sup> Again, doubt is cast upon the non-existence of a regulation in the years 1793-1795 by the evidence of Nathaniel Clayton, town clerk of Newcastle, before the Committee of 1800. Asked "whether that agreement has existed during the last ten years," Clayton answered, "I believe it has subsisted the whole of that time with some short interval; I believe it terminated at Christmas last, and that it does not now [March, 1800] exist: but I believe it only does not exist from some difficulty in the arrangement of quantities." Pressed as to the date and duration of the "short interval," Clayton answered, "It is not clearly in my recollection, but to the best of it, it was an interval of three or four months, and might probably have been five or six years ago . . . ; it was also owing to some difficulty in the arrangement of quantities, and I conceive it did not produce any effect as to the vendis."<sup>8</sup>

In the absence of any knowledge about Taylor's "document," it seems reasonable to believe Clayton's direct evidence and regard the decade of the nineties as one of almost uninterrupted regulation; while there is no dispute as to the year 1800, which was open.

For the period 1800-1820, evidence is scarce. I have found records of only two unregulated years, one of which is doubtful, though there may have been others. The year 1812 was mostly without any agreement, though negotiations were continually in progress for renewing the one which lapsed at the close of 1811.<sup>9</sup> Again in 1814, a very abnormal year in every way from weather

<sup>7</sup> See, for example, Anti-Monopolist, *Remarks*, p. 17; Ashton and Sykes, *The Coal Industry*, p. 214, and the authors there cited. Matthias Dunn, *View of the Coal Trade of the North of England* (1844), p. 45, gives the prices fixed in the regulation of 1787.

Dunn was one of the interesting figures in the coal trade in the early nineteenth century. He was long one of the leading "viewers," i.e., supervisors and colliery engineers; his writings are an important source of information; and he was one of the first to advocate government mine inspection. His manuscript notebook entitled "History of the Viewers" (in the Institute) is a highly entertaining account of some of the best-known of the mining engineers of an earlier time.

<sup>8</sup> *Report . . . of the Coal Trade*, 1800, pp. 544-545.

<sup>9</sup> Information from a manuscript book by Matthias Dunn, with the following inscription on its title page: "Sundry memoranda of my own transactions, and other occurrences in the coal trade of Newcastle on Tyne, in the manner of a journal for the year commencing this day. Wallsend, January 1st, 1812—Matt.<sup>s</sup>

conditions to change in taxation rates, there appears to have been no regulation.<sup>10</sup>

From 1820 or so onward, information is relatively very complete. This is due primarily to two causes; namely, (1) to the fact that parliamentary committees in 1829, 1830, 1836, and 1838 covered the twenties rather thoroughly; and (2) even more to the survival of the coal-trade minute books from 1827 on.<sup>11</sup> From these and other sources, we know that the regulation was off for all or part of the years 1821,<sup>12</sup> 1824,<sup>13</sup> 1826,<sup>14</sup> 1829, 1833, 1834.<sup>15</sup>

From the time when a new agreement was reached in March 1834, until the final dissolution in May 1845, the limitation had a continuous, though at times precarious, existence.

Throughout this period, the coal owners coöperated *vis-à-vis* their workmen. A batch of manuscripts in the Institute in Newcastle includes copies of the minutes of a series of meetings held between 1806 and 1811, copies which were apparently sent to Walker Colliery as a matter of record. These are almost altogether concerned with binding, wages, etc. That this should be so is not surprising in a period of advancing prices, scarcity of labor, and

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Dunn." It is in the collection of the Institute in Newcastle. Dunn discusses the lack of a regulation and the negotiations for a new one under the following dates: Jan. 1, 11, 18; Feb. 22, 29; March 12, 16; May 30; July 7, 11; Nov. 21.

<sup>10</sup> *Report from Select Committee on the Coal Trade (Port of London) Bill*, Reports from Committees, 1837-38, XV, 15. It is, however, not clear that the passage cited does not refer to a regulation among the factors in London which was certainly not in existence in 1814. The non-existence of regulation in the north in 1814 is not to be regarded as proved.

<sup>11</sup> These minute books are of two kinds. The first are the records of the Committee of the Coal Trade, the governing body of the cartel; the second the records of the general meetings of coal owners. The Committee's books run from Dec. 30, 1826 to April 22, 1840; the general books from Oct. 26, 1826 to March 6, 1847. See below, p. 58.

<sup>12</sup> Dunn, *View of the Coal Trade*, p. 75. But see below, p. 157.

<sup>13</sup> Bell Collection, VIII, 672. Open trade commenced late in June. Also, *Report from the Select Committee of the House of Lords Appointed to Take into Consideration the State of the Coal Trade*, Reports from Committees, 1830, VIII, 56. This Committee of the House of Lords was appointed and took evidence in 1829 and is consequently generally referred to in this book as the Committee of 1829 to distinguish it from the Commons Committee which was appointed in 1830. The reports of the two committees are published in the same volume.

<sup>14</sup> Dunn, *View of the Coal Trade*, p. 75; Taylor, *Observations*, p. 33; *Report from the Select Committee on the State of the Coal Trade*, Reports from Committees, 1836, Vol. XI, p. 144.

<sup>15</sup> These years will be treated at length in Chapter IX below.

rising wages. The coal owners were anxious that their own competition for labor should be kept within bounds. Nevertheless, by 1804 it was said that binding money had risen from the usual sum of one or two guineas to the relatively enormous sum of twelve to fourteen guineas, while wages had gone up 30 to 40 per cent as compared with only a few years back.<sup>16</sup>

On October 2, 1806, a meeting of coal owners was held at Newcastle to cope with the problem. Among the resolutions passed was one "that no colliery shall insert in their bonds any obligation to supply their men with rye, or any other kind of bread corn." Apparently indirect inducements were being offered on a large scale, for on November 21, 1806, another meeting was called at which strong protestations were voiced against those coal owners who violated the conditions as to binding already laid down.<sup>17</sup>

The next two years seem to have seen the recurrence of much the same difficulties. Meetings of September 24, 1807, and September 17, 1808, laid down strict rules about binding and exhorted the coal owners to observe them in their common interest. The next year saw a relieving of the tension, and binding money was substantially reduced.<sup>18</sup> At about the same time (September 30, 1809) a resolution was passed looking to the alteration of binding from the autumn, when sales were at their peak, to January. No attempt was made to put this resolution into effect until the following year, when the owners tried to force a fifteen-months' bond on their workers, thus bringing its expiration to the desired month. A strike was the result. Military forces were called out before a compromise was at length effected through the mediation of a local clergyman. The owners accepted the terms of the compromise at a meeting held January 7, 1811; henceforth April was fixed as the binding month.<sup>19</sup>

Coöperation among the owners against their workers reached a higher plane in the strikes of 1831, 1832, and 1844, partly, no

<sup>16</sup> Dunn, *View of the Coal Trade*, p. 28.

<sup>17</sup> At this time the annual binding took place in late autumn.

<sup>18</sup> Ashton and Sykes, *The Coal Industry*, p. 95.

<sup>19</sup> See Galloway, *Annals*, I, 440-441, and Ashton and Sykes, *The Coal Industry*, p. 95, for an account of the strike of 1810.

doubt, in response to the first attempts on the part of the miners to form themselves together into a permanent organization. Following the repeal of the Combination Laws in 1824, the first miners' union was organized.<sup>20</sup> Local strikes were at length followed by a full-dress battle between the union and the employers, commencing at binding time in 1831. The owners were caught off their guard and had to give way, but when the men, encouraged to boldness by this initial victory, returned to the attack the following year, they found their employers ready. A long-drawn-out battle ended with the complete rout of the union forces;<sup>21</sup> for a decade the owners were, considering the near-revolutionary temper of the British working class during the 1830's remarkably free from labor troubles. A short strike late in 1836 was unsuccessful.<sup>22</sup>

Not for very long, however, could the miners be held in subjection. In 1842 the Miners' Association of Great Britain and Ireland — the first union of miners on a national scale — was launched, at the suggestion, so it was said, of Fergus O'Connor, the Chartist leader. W. P. Roberts was made legal adviser at a salary of £700 per annum, and paid organizers were sent out. This was organization on a scale never before attempted. The stronghold of the Association was the Durham-Northumberland field, where enthusiasm was aroused at numerous public meetings; hours of work were restricted, as they had been after the successful strike of 1831; and the surprised coal owners were the targets of innumerable legal actions for violation of the bonds, a weapon which they had previously thought to be their own exclusive possession. Early in 1844 the Association had about 60,000 members, chiefly in Durham, Northumberland, Lancashire, and Lanarkshire, and about £24,000 in the bank.<sup>23</sup>

<sup>20</sup> *Rules and Regulations and the Formation of a Society, to be Called the United Association of Colliers of the Rivers Tyne and Wear* (Newcastle, 1825). See also E. Welbourne, *The Miners' Unions of Northumberland and Durham* (1923), pp. 25 and following.

<sup>21</sup> The strikes of 1831 and 1832 are considered in detail below, pp. 96-101.

<sup>22</sup> Galloway, *Annals*, II, 169.

<sup>23</sup> At this time the total number employed in and about the mines of Northumberland and Durham was estimated to be just short of 34,000 (*Reports on the Gases and Explosions in Collieries*, Reports from Commissioners, 1847, XVI, 42).

When the bonds expired on April 5, 1844, the miners of the northeastern district walked out in a general strike. The miners' demands were four in number: (1) advance in wage rates, (2) reduction in hours, (3) a guarantee of five days' work or 15s. per week, (4) binding for six months instead of one year. The remarkable thing is that in respect to the first three demands, they had been definitely better off following the strike of 1831 than they were in 1844. This is attested to by the coal owners themselves, who set up special committees to investigate conditions both during the strike of 1832 and during that of 1844.<sup>24</sup>

Table 2 compiled from the reports of the two committees, gives the comparative situation with respect to wages and hours. From

TABLE 2  
WAGES AND HOURS OF UNDERGROUND WORKERS

	1832		1844	
	Daily Wage	Hours of Work	Daily Wage	Hours of Work
Hewers	$\left\{ \begin{array}{l} 2/3 \dots 4s. \dots\dots 6 \dots\dots \\ 1/3 \dots 4s. \dots\dots 7 \dots\dots \end{array} \right\} \dots$		3s. 8d. ....	8
Putters	4s. ....	11	3s. 6d. ....	12
Shifters	3s. ....	8	2s. 9d. ....	8
Rolly-boys	1s. 6d. ....	12	1s. 2d. ....	12
Trappers	10d.-1s. ....	12	10d. ....	12

these data it is easy to see how effective the employers had found their union; and it is equally easy to understand the attitude of the miners.

The strike was so effective that not long after its inception coals were actually "carried to Newcastle." But the owners were prepared to go to any length to win; and at length the miners, their resources exhausted, submitted in August 1844, in the face of an ever increasing stream of imported scab labor. The union, needless to say, collapsed with the strike.

Nevertheless the strike had lasting effects of great consequence.

<sup>24</sup> Both committees published reports: *Report by the Committee of the Coal-owners Respecting the present Situation of the Trade*, March 10, 1832; and *Report of the Special Committee Appointed by the Coal-owners of Northumberland and Durham, Respecting the Cessation of Work by the Pitmen, Read at a General Meeting of the Trade Held at Newcastle-upon-Tyne, on the 27th of April, 1844.*



In the first place, it marked the end of the yearly bondage system; and, more important for our study, it proved to be the blow which finished off the already disintegrating Limitation of the Vend.<sup>25</sup>

<sup>25</sup> Details of the strike, except where specific references are given, are taken from Galloway, *Annals*, II, 170-179. The classic account of this strike is that of Friedrich Engels in his *Condition of the Working Class in England in 1844* (New York, 1887), chap. ix. Extremely interesting, also, is the account given by Seymour Tremenheere in his *Report of the Commissioner Appointed under the Provisions of the Act 5 and 6 Vict. c 99*, Reports from Commissioners, 1846, vol. XXIV.

## CHAPTER VII

### THE IMPACT OF POWERFUL FORCES

BEFORE proceeding to a detailed analysis of the Limitation, its functioning, and its effects, it is necessary to say something about the profound changes which began to manifest themselves in the coal trade about 1830. We have already noticed briefly the change in the relationships between owners and miners which ensued upon the repeal of the Combination Laws and the efforts of the workers to organize themselves into a union. But other and even more profound forces were at work.<sup>1</sup>

Bare figures of total exports from the northern region indicate strikingly the changes under consideration. In 1770 about 1,550,000 tons of coal were shipped from Northumberland and Durham; by 1830 this had risen to 3,803,000. This represents a total increase of 145 per cent or a modest annual rate of increase of about  $2\frac{1}{2}$  per cent of the original figure. By 1845, however, total shipments were no less than 6,424,000 tons,<sup>2</sup> an increase over 1830 of almost 70 per cent, or about  $4\frac{3}{4}$  per cent annually.<sup>3</sup>

What accounts for this sudden forward leap in the production

<sup>1</sup> These "other" forces were by no means unrelated to the change in the relations between capital and labor. In fact, at bottom they were precisely those forces "which persuaded the coal-owners to treat labour as a commodity in a market subject to unalterable laws of supply and demand," which sums up the essence of the change we have been discussing. The quotation is from Welbourne, *The Miners' Unions*, p. 27.

<sup>2</sup> This figure is, to be sure, somewhat exaggerated because of the strike in 1844 and the dissolution of the Limitation in May 1845. The figure for 1846, about 6,200,000, would perhaps be a better one for comparison.

<sup>3</sup> The figure for 1770 is from Ashton and Sykes, *The Coal Industry*, p. 250 (Newcastle chaldrons converted to tons at the official rate of 53 cwt.); those for 1830 and 1845, from G. R. Porter, *Progress of the Nation* (3rd ed., 1851), Section II, chap. vi. I have compared Porter's statistics with various other sources and find them quite reliable. Citations will be made from Porter when possible because of its accessibility.

It should be noted that all coal was shipped from the Tyne and the Wear in 1770, except for a small amount from ports along the Northumberland coast. The Tees had no more than started shipping in 1830. But by 1845 a very substantial fraction went from the Tees and the new port of Seaham, privately constructed by the Marquis of Londonderry and opened in 1831.

of coal in the northeastern field? The chief factor was undoubtedly the introduction of the steam railroad. The first public railroad in the world, the Stockton and Darlington, was opened in 1825. It connected the inland coal regions of southwest Durham with the coast. Originally the project was planned for the purpose of supplying the coastal region with coal, as well as facilitating trade in general,<sup>4</sup> the development of an export trade in coal being decidedly a secondary consideration.<sup>5</sup>

In a few years, however, the export trade of the Tees began to grow by leaps and bounds, becoming, as we shall see later, a serious source of competition for the Tyne and Wear owners, until the latter were forced to extend the scope of their regulation and include their southern neighbors. Table 3 shows the amounts of coal exported in the years 1826-1835, according to the tonnage account of the Stockton and Darlington.<sup>6</sup>

TABLE 3

EXPORTS FROM THE TEES FOR NINE YEARS, BEGINNING JUNE 30, 1826

Year	Tons	Year	Tons	Year	Tons
1826-27 . . . . .	18,588	1829-30 . . . . .	79,416	1832-33 . . . . .	336,060
1827-28 . . . . .	54,290	1830-31 . . . . .	151,262	1833-34 . . . . .	285,765
1828-29 . . . . .	46,216	1831-32 . . . . .	281,960	1834-35 . . . . .	357,726

Meanwhile the extension of railways was going ahead all over England, though nowhere with such rapidity as in the County of Durham.<sup>7</sup> The rich inland coal fields, which had hitherto been practically unworked for lack of any means of getting the coal out to market, offered a tempting bait to railway and mine speculators.

<sup>4</sup> Before the opening of the Stockton and Darlington, the Tees was a river into which coal was shipped (Galloway, *Annals*, I, 455).

<sup>5</sup> A committee, "appointed by the numerous and respectable meeting held at Darlington on the 4th of September last [i.e., 1817]," presented in 1818 *A Report Relative to the Opening a Communication by a Canal or a Rail or Tramway, from Stockton, by Darlington, to the Collieries*. In this it was emphasized that the eventual formation of an export trade in coal was "a speculation at present *some-what problematical*" (p. 9; the italics are in the original). And in making estimates of the probable amount of traffic, the export trade is counted for a mere 10,000 tons annually (p. 13).

<sup>6</sup> *Report . . . of the Coal Trade*, 1836, p. 105.

<sup>7</sup> See, for example, the "Railway Map of England and Wales" for 1836 in H. G. Lewin's *Early British Railways* (1925), p. 41.

Act after Act was pushed through Parliament despite the bitter opposition of the entrenched owners of the Tyne and Wear.<sup>8</sup>

The next line to be opened in the coal district, after the Stockton and Darlington, was the Clarence in 1833. Between that time and 1844 no less than fourteen<sup>9</sup> new lines were opened in Durham and Northumberland, practically all of them with the coal trade in view.

Speaking of the developments since the introduction of the railroad, Anti-Monopolist exclaimed in 1843, "The region of developed coal-field has been extended in every direction, until it describes a vast circuit, stretching from the coquet in the remote north to the sterile waste of Cockfield Fell in the far west, sweeping around Bishop Middleham in the extreme south till stopped by the German Ocean on the east."<sup>10</sup> The language perhaps suggests more territory than is contained in the two counties of Durham and Northumberland, but it was necessary to impress upon the contemporary reader the magnitude of the changes that were going on under his very eyes.

The more thorough investigation of the relations between this development and the Limitation will occupy our attention at a later stage. For the moment it is sufficient to note the scope of the movement.

If great changes set in during the 1820's in the sphere of labor relations and through the introduction of the railroad,<sup>11</sup> this was

<sup>8</sup> This aspect of the railroad movement is analyzed below. It exemplifies in classic form the concern of monopolists to protect their investments, regardless of the social costs involved.

<sup>9</sup> This figure is compiled from Lewin, *Early British Railways*. Many of these lines soon fell under the domination of George Hudson, the greatest railway builder and speculator of the first half of the nineteenth century. See R. S. Lambert, *The Railway King, 1800-1871; a Study of George Hudson and the Business Morals of His Time* (1934), especially chap. iii.

<sup>10</sup> Anti-Monopolist, *Remarks*, p. 50.

<sup>11</sup> In this connection I ought to mention, at least in passing, the (much less important) early effects of the steamship on the coal trade. Naturally enough the seagoing colliers themselves long remained sailing vessels, but adverse winds frequently prevented the colliers from putting out to sea for weeks on end. Steam tugs overcame this difficulty and thereby contributed greatly to the regularity of the supply in the London market. An experienced London factor told the Committee of 1836: "Steam has been used upwards of 12 years in towing vessels out. Ever since . . . the coal trade has quite changed; before . . . , we have been without a supply for a month or six weeks together, and then the buyers used to come down

no less true in the relations between the state and the coal trade. The coal trade came into contact with public authority in two ways; namely, through taxation and through the regulation of the sale and delivery of coal. It would be both tedious and unnecessary for present purposes to go into the history of this aspect of the trade. Suffice it to give a brief description of the state of affairs existing before the great reforms of 1831 and to indicate the nature of those reforms.<sup>12</sup>

The system of taxing coal, which had grown up in the course of the centuries, could not possibly have been justified on any equitable principles of public finance. Nor was any attempt made to do so. Its lasting powers stemmed from the simple fact that it produced a large revenue which no finance minister would willingly forgo. In the first place, there was the notorious Richmond shilling, a tax of one shilling per Newcastle chaldron on all coal shipped from the Tyne. This tax had been levied by Charles II and the income granted to his natural son, the Duke of Richmond, at a time when Newcastle was the only important port shipping coal. It bore unevenly on coal owners and, naturally enough, was continually opposed by those in the Tyne district.<sup>13</sup> Secondly, there was the main government duty on coals carried coastwise. Throughout most of the eighteenth century the rate was 5s. per London chaldron. It was raised at various times before and during the Napoleonic Wars, reaching a maximum of 12s. 6d. in 1809, and was then reduced in 1815 and finally lowered to 6s. in April 1824. To this must be added an extra sum, varying between 3s.

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and buy, on the arrival of a fleet, not only what coals they required, but a stock in order to guard against the contingencies of a long easterly wind. The trade then held in warehouses and in craft a sufficient supply for from two to three months; but since the introduction of steam I believe the trade often come down and purchase for their present wants, knowing that they have in the river always a sufficient supply to meet every demand." (Pieced together from the evidence of Bentley, in the *Report . . . of the Coal Trade*, 1836, pp. 74-76.)

<sup>12</sup> The relations between the government and the coal trade occupied much of the attention of all the parliamentary inquiries cited in this study. Furthermore they were the subject of heated controversy among contemporary pamphleteers. The interested reader will find in the bibliography ample material for a full study of the question.

<sup>13</sup> The story of the Richmond shilling has been told over and over again. See, for example, *Records of the Company of Hostmen*, pp. 223-224.

and 4s., on all coal imported into London.<sup>14</sup> This extra was done away with in 1824, so that between that date and 1831 the rate of 6s. per London chaldron was charged on all coal carried coastwise.<sup>15</sup> As for coal exported to foreign countries, the duty was extremely high throughout, amounting almost to a prohibition. In 1824 it was reduced from £1 2s. to 17s. per Newcastle chaldron. What was called "re-screened small coal," i.e., coal which passed through a three-eighths-inch screen, was given favorable treatment in 1814, the duty on this type being reduced to 6s. per Newcastle chaldron and further to 4s. 7d. in 1825. Finally there were the local dues and charges which differed at the various ports into which coal was shipped. It is no easy matter to get intelligible information on these, but for London, anyway, they cannot have been very different from 2s. per London chaldron during the 1820's.<sup>16</sup>

On the side of the regulation of sale and delivery, the government confined its activities largely to the London market.<sup>17</sup> The investigation of 1800 was followed by no less than five Acts in the next seven years, the last of which was the most detailed and subjected nearly every stage the coal went through after arriving in London to the most careful regulation. This Act, representing the high-water mark in state regulation, remained in force down to 1832. A brief explanation, leaving out technical details, of how the coal reached the consumer will be of assistance in understanding the nature of the regulations.

On arrival, the ships' cargoes were put into the hands of factors who acted as agents for the shipowners or for the coal owners in the north.<sup>18</sup> They cleared the customs and offered the coals for sale on the Coal Exchange. Their customers were known as

<sup>14</sup> This extra duty had its origin in a levy on coal to help rebuild churches burned in the great fire of 1666.

<sup>15</sup> The enormous size of even this 6s. tax can be understood when it is pointed out that the coal owners at this time (i.e., 1824) were receiving only about 17s. per London chaldron for best coal, and considerably less for poorer grades.

<sup>16</sup> This summary of coal taxation is put together from a variety of sources. A fuller discussion of the subject is undertaken by Ashton and Sykes, *The Coal Industry*, Appendix D.

<sup>17</sup> The most notable exception was the so-called Turn Act, 6 Geo. III, c. 22, which prescribed that all ships taking on coal in the Tyne should load in the order of their arrival. This Act did not apply to other ports.

<sup>18</sup> For the most part the shipowners bought the coal in the north and sold it on their own account.

first buyers — owners of river craft, often on a considerable scale, who, after contracting for a cargo or part of one, sent their barges or lighters to fetch the coal. The first buyers then sold, either on the wharves directly from the lighters, or from warehouses, to large consumers or to second buyers. The latter in turn carted the coal around to the various small dealers and retailers, whence it reached the average household consumer.<sup>19</sup>

The enactments of public authorities impinged at various points on this process. Aside from such details as the forms on which sales should be reported, the hours of business on the Coal Exchange etc., the most important regulations concerned the measuring and handling of the coal. Coal was required to be sold by measure rather than by weight,<sup>20</sup> and elaborate precautions were considered necessary to protect the buyers and consumers against fraud. Two separate groups of meters were provided, and all coal was obliged to pass through both checks.<sup>21</sup> The first group were the sea meters, officials who supervised the transference of the coal from the seagoing colliers to the Thames lighters, and secondly there were the land meters, who were supposed to see that all coal unloaded at the wharves was put into sacks of a prescribed size before going on to the warehouse or the second buyer. Despite these elaborate safeguards, or perhaps partly because of them, fraud and corruption were rampant. The abuses of the metering system were a public scandal.

Another point at which regulation gave rise to grave abuse was in the case of the coal whippers, laborers who did the actual work of transferring the cargoes of the colliers to the lighters. Their wage was prescribed by Act of Parliament at a figure well above that for other work requiring no special skill. The result

<sup>19</sup> *Report of the Select Committee on the State of the Coal Trade*, Reports from Committees, 1830, vol. VIII, various passages. This Committee took very detailed evidence on every aspect of the working of the Act of 1807. The summary of state regulation which follows is taken mainly from the same source.

<sup>20</sup> Small coal weighing the same as large takes up more room. Since sale in the north was by weight, the temptation to buy large coal and break it up was irresistible. No complaint was more persistent than that directed against this practice.

<sup>21</sup> All coal was equally obliged to pass through the Exchange. Thus when one of the northern owners wanted to put a cargo into his London cellar, he had to arrange a sham sale to himself and have the cargo measured just as though there had been a *bona fide* sale.

was that the poor coal whippers fell an easy prey to publicans who acted as undertakers supplying the service to the ship captains.<sup>22</sup>

This summary of the relations between the state and the coal trade existing in the early nineteenth century might be greatly elaborated and expanded, but it is probably sufficient to indicate that the situation was, to say the least, an anomalous one in an era supposedly dedicated to free trade and the rationalization of the mercantilist system of taxes and duties. But effective reforms, even the most obvious and urgent, do not carry themselves out; they require the backing of a group in the community of sufficient power and influence to get its way. The only such group with an interest in the coal trade was the coal owners themselves.<sup>23</sup>

The abuses of the trade, particularly as regards the system of taxation and the conduct of business in London, had long been a familiar story.<sup>24</sup> But so long as the Tyne and Wear area was the only source of sea-borne coal, the operators of that district were content to let well enough alone. It was only when they began to feel the pressure of incipient competition that they aroused themselves and made use of that great political influence which was

<sup>22</sup> This situation was not remedied by the Act of 1831. The Committee of 1838 called several whippers to testify. Their story, told with simple eloquence, together with an account of a long struggle on behalf of the whippers told by a former naval officer, gives a vivid picture of one aspect of nineteenth-century capitalism and the indifference with which it was regarded by many of the more fortunate. Regarding his attempt to interest the shipowners in the plight of the whippers, Lieutenant Arnold testified as follows: "In one instance I mentioned to the shipowners the hardship under which these poor men laboured, and one of them said, 'Sir, unless you can show us that you save us a farthing, we can do nothing in it.'" (*Report . . . on the Coal Trade (Port of London) Bill*, 1838, p. 153.)

<sup>23</sup> The coal owners were to a very considerable extent the cream of the British landed aristocracy, while the Church of England was one of the most important holders of royalties in the northern counties. They were more than able to look after themselves in the legislature. Once, in 1784, when Pitt proposed to levy new taxes, George III wrote, "It seemed to be an opinion yesterday that the brick tax was the one most likely to be opposed, but Mr. Pitt not having mentioned it, I suppose that branch of trade has not so many friends in the House as the coal-pits, which are the property of more considerable persons, and therefore more clamorous, though not less able to support a new charge on their profits" (quoted from Stanhope's *Life of Pitt* by Ashton and Sykes, *The Coal Industry*, p. 2).

<sup>24</sup> See, for example, H. G. McNab, *Letters to Pitt on the Inequality, Oppression and Impolicy of the Taxes on Coal* (1793); David Hardie, *Taxation of Coals* (1792); Charles Beaumont, *A Treatise on the Coal Trade* (1789).



theirs. Writing of the years after 1817, Galloway says of the Newcastle and Sunderland proprietors:

They no longer held the coal trade entirely in their own hands. They no longer could fix the prices of coal and regulate the vend among themselves at their own will. Competitors were springing up far and near. Year by year they were being driven more and more out of markets they formerly possessed, by the inland coals which were duty free; as well as by the sea-borne coals from Wales, now becoming a considerable trade. In their altered circumstances the northern coal-owners began to find the duties on sea-borne coal, which had been imposed for the most part when Newcastle possessed almost a monopoly of the trade, coming to be an insupportable burden, and to agitate for relief.<sup>25</sup>

Further, there was a growing awareness that the inefficient and fraudulent conduct of the trade in London was keeping the price high and the quality bad, to the injury of the interests of the mine owners.

It is clear that the owners put on foot the parliamentary inquiries of 1829 and 1830. At a meeting of the Tyne Committee on May 13, 1828 the intention of Sir M. W. Ridley to move for an investigation at the next session was approved. Actually Lord Londonderry, the largest Wear owner, appears to have been responsible for procuring the appointment of the Lord's Committee in 1829.<sup>26</sup> The minute books of the trade are filled with preparations for the coming investigations during the early months of 1829; the owners were determined to put their case across in the most effective manner possible.

But it was only after the Committees of both houses had reported that the gentlemen from the north really began to put on pressure. Extracts from the findings of the parliamentary investigations "were published and circulated through the country." A permanent deputation was set up in London to coördinate the work of the campaign, led by the Chairman of the Coal Trade Committee, R. W. Brandling, and seconded by other important persons including Hugh Taylor and Henry Morton. Liberal financial grants were made from time to time for the purposes of this work.<sup>27</sup>

<sup>25</sup> Galloway, *Annals*, I, 457.

<sup>26</sup> *Anti-Monopolist, Remarks*, p. 29.

<sup>27</sup> Information from *Anti-Monopolist, Remarks*, p. 31, and various resolutions, etc., included in the coal-trade minute books.

Needless to say there was opposition, most of which apparently came from the interested dealers in London;<sup>28</sup> while the shipowners refused to coöperate with the mine owners.<sup>29</sup>

Nevertheless, despite all resistance, the campaign of the coal owners succeeded in arousing public indignation about the taxes on coal, and, supported by this wave of popular feeling, it swept on to victory.<sup>30</sup> The triumph of the owners was embodied in the Act of 1 and 2 William IV, c. 76, passed in 1831 and effective at the beginning of 1832. The Coal Exchange continued to be vested in the Corporation of London, and the Mayor and Aldermen were given powers to make bylaws regulating the market.<sup>31</sup> All restrictions on access to the market were done away with, and no longer was coal arriving in London required to pass through the Exchange. Most important, however, was the substitution of sale by weight for sale by measure and the complete abolition of the cumbersome system of public metering.<sup>32</sup> The doctrine of *caveat emptor* ruled supreme.<sup>33</sup>

<sup>28</sup> Anti-Monopolist, *Remarks*, p. 32.

<sup>29</sup> In a letter, dated April 8, 1829 and copied into the general minute book, the shipowners declare that they will not help the coal owners to get duties lowered. It is, they say, a matter of very little concern to them and their participation in the campaign might prevent them from getting much more important favors from the government.

<sup>30</sup> An interesting by-product of this campaign is mentioned by Anti-Monopolist. The coal owners were frequently the target of charges of being monopolists, extortioners, etc. So skilled was their propaganda, however, that for the time being their sins were forgotten. "The public mind was disabused, and the true nature and general advantages of their 'Regulation' were made patent to the understandings of all" (*Remarks*, p. 33). As the tone of this quotation indicates, Anti-Monopolist was really all on the side of the owners despite the opposite implications of his *nom de plume*.

<sup>31</sup> None had been made by 1836 (*Report . . . of the Coal Trade*, 1836, p. xxiv).

<sup>32</sup> A committee of factors and buyers was immediately formed to supervise the weighing of coals, but no one was obliged to make use of its services if he did not choose to (*Report . . . of the Coal Trade*, 1836, p. xxiv). The change in the unit of sale is greater than at first sight appears. Under the system of sale by measure, it was customary for the buyer to receive free what was called "ingrain" amounting to roughly 5 per cent of the nominal amount of his purchase. In practice, of course, the price covered the chaldron with ingrain. The Act of 1831 did away with ingrain altogether, and after that date the price is per true ton. See *Report*, 1836, Evidence of James Bentley, p. 66. These facts should be borne in mind in comparing prices before and after 1832.

<sup>33</sup> Bentley estimated in 1836 that the saving through the simplification and cheapening of marketing processes made possible by the Act of 1831 amounted to no less than 3s. 6d. per ton (*Report . . . of the Coal Trade*, 1836, pp. 66-67).

In the matter of taxation, the Act of 1831 was, if anything, even more significant. The coastwise duty on coal of 6s. per London chaldron was simply abolished as was the Richmond shilling. Local dues in London were consolidated and made intelligible; henceforth they amounted to 13*d.* per ton. The duty on coal exported to foreign countries was substantially reduced by another Act of the same year, namely 1 and 2 William IV, c. 16.<sup>34</sup>

The Act of 1831 represents the triumph of the principles of free trade and rational taxation in the coal industry. The cloying fetters of mercantilist trade and fiscal policy were swept away with one stroke. Henceforth the coal trade was to be free to develop according to its own nature and that of its economic environment.

The first half of the nineteenth century, the period of capitalism triumphant, is well summed up in three events which we have been discussing. First, the opening of the Stockton and Darlington railroad; second, the formation of the first union among the miners; and third, the passage of the Act of 1831. They symbolize, as it were, the industrial revolution,<sup>35</sup> the growth of the proletariat, and the victory of free trade. Corresponding symbols could doubtless be found in other industries, but that such striking examples should all occur in the same trade and within a space of six years is surely a remarkable coincidence, and, in a sense, even more. It may be taken to reflect the basic character of coal, without which all the other developments would have been impossible.

So far as this study is concerned, the three events epitomize those forces which shook the coal trade out of its centuries-long rut and led, in a comparatively few years, to the end of the Limitation of the Vend.

<sup>34</sup> Reduced to a per ton basis, the reductions were as follows: (1) to British possessions from 1s. to 8*d.*; (2) to foreign countries in British ships or ships acting under a Treaty of Reciprocity, from 5s. 9*d.* to 3s. 4*d.*; (3) to foreign ships in other foreign vessels, the duty was raised from 10s. to 12s. 2*d.* Further reductions were made in August 1831 and in 1834. After the last of these changes, exports under (1) were free; under (2) paid 10s. per cent *ad valorem*, and under (3) paid 4s. per ton. (*Report . . . of the Coal Trade*, 1836, Appendix 4.)

<sup>35</sup> Was it not Professor Clapham who called the railroad "the industrial revolution incarnate"?

## CHAPTER VIII

### STRUCTURE AND POLICIES OF THE LIMITATION

#### I. STRUCTURE AND ORGANIZATION

HAVING sketched out the background against which the Limitation functioned, we must now proceed to analyze the nature and effects of the arrangement itself. Aside from the investigation of 1800 and a few stray documents in the Institute at Newcastle, most of the material for this part of our study relates to the period covered by the minute books described above and investigated by the parliamentary committees of 1829, 1830, 1836, and 1838. This is not a very serious matter, since what evidence there is goes to show that no changes of any importance occurred between 1800 and 1828. All the important changes came after the latter date, a fact which should not be surprising in view of the preliminary survey given in the last few chapters.

While it is not hard to get a picture of the general outlines of the structure of the cartel, one runs into difficulties in attempting to give a more exact description. In particular, the relations between the Tyne and the Wear appear to have been of a very informal nature prior to 1829. In fact it was precisely this lack of any regularized method of dealing with disputes between the two rivers that led to the breakdown of the regulation in that year, and to the introduction, when it was re-formed, of important new provisions. On the other hand, fairly exact information about the way the trade on the Tyne was organized and regulated is available for substantially the whole period. A description of this latter has quite generally been passed off as a description of the whole Limitation of the Vend, while the relation between the Tyne and the Wear has been slurred over or neglected.<sup>1</sup> This is a convenient procedure, for it must be admitted that it is not easy to infer from the available evidence what the nature of that

<sup>1</sup> See, for example, Levy, *Monopoly and Competition*, pp. 116 and following.

relation was, at least for the period before 1829. Nevertheless, we must make the attempt.

Each river appears to have been largely autonomous, having its own agreement and administering its own affairs. The body of coal owners in each case was, of course, the source of authority and the final court of appeal. The fact that there were five or six times as many owners on the Tyne as on the Wear made different arrangements necessary, however.

On the Tyne, where as early as 1800 there were some one hundred different people interested in the ownership or leases of thirty-three collieries,<sup>2</sup> it was obviously not practical to hold general meetings except on such important occasions as the adoption of a new agreement. Hence each colliery appointed a representative with full authority to act on its behalf, and these representatives elected from among their number a committee. This committee, known in Newcastle as the Committee of the Coal Trade, was the board of directors, so to speak, of the Tyne district.<sup>3</sup>

The Wear was the scene of mining on a much larger scale and greater concentration of ownership. Figures for 1800 comparable to those given above for the Tyne are less than thirty people interested in seventeen collieries, whereas the Wear produced about two thirds as much coal as the Tyne. This tendency to concentration had proceeded much farther by the 1830's. In 1831 there were only seven owners of any consequence on the Wear.<sup>4</sup> Under such circumstances, there was no need for any special elections; the representatives of the various owners simply formed the Wear Committee. These two Committees together constituted the United Committee which was concerned very largely with

<sup>2</sup> See the very interesting table, "Names of Collieries, Lessees, and Viewers at the Blyth, Tyne and Wear Collieries, about the year 1800," compiled from various sources by Mr. T. V. Simpson and published in his paper, "Old Mining Records and Plans," *Transactions of the Institute of Mining Engineers*, vol. LXXXI, Part 1, pp. 75-108.

<sup>3</sup> The size of the Tyne Committee varied. It was increased from seven to nine in the agreement adopted for 1828 (*General Minute Book*, Nov. 10, 1827).

<sup>4</sup> They were: Lord Durham, Lord Londonderry, The Hetton Coal Co., Stobart and partners, M. I. Davison, Wm. Russell and Co., Wm. Bell and partners. This fact appears in the transactions of the United Committee, to be explained below.

the question of quantities sold. After the Tees joined in 1834, it had a Committee which then became part of the United Committee.<sup>5</sup>

Up to 1829 the method of settling a dispute on the Tyne was to refer it to the Committee, and, if the Committee could not settle the matter amicably, then to the general body of owners. The latter could render a decision by majority vote; and, when such a decision was reached, it was most unlikely that it would not be respected. The same was true on the Wear. But when it came to disputes between the two rivers the matter was different. The United Committee could attempt to work out an acceptable solution, but if it failed there was no final court of appeal. A general meeting of owners of both districts could be held, but it was obvious that the Wear owners could not agree to be bound by majority vote. Precisely this sort of situation, to be described in detail later, developed in 1829 and led to the breakdown of the regulation. When the regulation was re-formed, regular machinery for arbitrating disputes of all sorts was included and became one of the most important features from that time on. Detailed consideration of this matter will be reserved until we come to the general question of enforcement.

I believe this to be a fairly accurate description of the structure of the cartel. It is perhaps best summarized by an analogy. The Tyne and the Wear were like two sovereign nations linked together by treaty. In 1829 they renounced war as a method of

<sup>5</sup> The general meetings and the committees, separately and combined, kept minutes which have been preserved. In order to facilitate reference I shall henceforth use the following notation: —

- CT . . Committee of the Tyne
- CTW . . United Tyne and Wear Committee
- CTTW . . United Tyne, Wear and Tees Committee
- GT . . General meeting of Tyne owners
- GTW, GTTW etc., as above.

The minute books I have seen were those kept at the Coal Trade office in Newcastle and hence cover only meetings held in Newcastle; except in rare cases when for some reason or other the minutes of meetings held at Chester-le-Street, where the Wear owners usually met, or Stockton, were deemed important enough to be copied into the Newcastle books. Sometimes other material, like letters and newspaper clippings, is either pasted or copied into the books. When reference is to such material, the fact will be specifically stated. Identification is by date in all cases.

settling their differences and joined a world court, agreeing, again by treaty of course, to abide by its decisions. In 1834 the Tees and Hartley and Blyth were admitted to the concert of nations.<sup>6</sup>

## 2. QUOTAS AND RELATIVE PRICES

With this much of an idea of the agencies through which the agreement worked, let us turn our attention to the question of how prices were fixed and outputs apportioned among the various claimants to a share. In doing so we shall leave for subsequent treatment the more important problem of the criteria for price and output as a whole.

The method of price fixing was simple. Every year when the agreement came up for renewal the producers of best coal, mostly of the Wallsend variety, were asked to name the price at which they intended to sell for the ensuing twelve months. When this had been done, the producers of inferior grades set their prices at a certain proportion of the highest price. The differentials were apparently based on past experience and were only gradually revised with changes in market conditions. Ordinarily the price list so drawn up was put into effect for a year's time. If, however, any owner should find that on the basis of the quoted price and the relative production quota allotted to him, his sales were

<sup>6</sup> It is not easy to document this account of the cartel's structure. It comes partly from a mental reconstruction based on the minutes of the various bodies concerned. Naturally in such a case no one or two references would be of much help.

More concretely, however, there are the written agreements which throw light on some aspects of the question. A new agreement was drawn up only on rare occasions, the usual method being to amend the old one. The Tyne agreement for 1835 is included in this book as Appendix B. From a "legal" point of view, it is a curious document. No definition of the relations between the rivers is given and the matter is not mentioned until Article 7, in which it is provided that disputes are to be settled by reference. The powers and composition of the United Committee are not laid down, that body first appearing in Article 8 without any previous notice. Article 12 is framed so as to apply to all the rivers; while Article 32 expressly stipulates that "these rules" are to be signed by "the proprietors of every colliery on the Tyne" but will not go into effect until "the coal-owners of the Wear etc. shall have signified their willingness to act in concert with the Tyne committee upon the general principles of this agreement."

Of course, in practice the coal owners had a large body of experience and many precedents by which to judge the meaning of this agreement, and no difficulties of interpretation appear ever to have arisen.

getting seriously out of line, he could propose to change his price; and, on receiving the necessary sanction, the desired change would go into effect. That is to say if his sales were consistently running behind or ahead of his quota, he would know that his price was, relative to the others, too high or too low.

This question of fixing the relative prices of different grades of coal was the source of much less friction than might at first be imagined. The reason is that quotas were determined, as we shall presently see, on principles which were largely independent of prices charged. Quotas having been fixed, it was not to the interest of any one to charge prices either higher or lower than would just enable him to sell his share; nor could any one well object to each owner's attaining this objective. The result was that conflicts of interests centered on the question of quotas. It should be further noted that the question of relative prices was independent of the level of prices as a whole.<sup>7</sup>

The problem of controlling quantity was really the heart of the limitation and consequently deserves careful attention. As in the case of prices, we reserve for subsequent treatment the question of aggregate quantity and confine ourselves to the problem of relative quantities both as between districts and as between individual producers.

As between districts a certain distribution of total output was first established by negotiation. This was done by taking a quantity more or less arbitrarily and calling it the "basis" for, say, the Tyne. Then the Wear basis was derived from this by applying the multiplier agreed upon. This multiplier was "about  $\frac{2}{3}$ "

<sup>7</sup> These are the general principles on which relative prices were fixed as told to the Committee of the House of Commons in 1830 and 1836 by R. W. Brandling, the chairman of the United Coal Trade Committee.

Brandling admitted that "before the prices are finally settled, there are perpetual variations; but not after the prices are fixed" (*Report . . . of the Coal Trade*, 1830, p. 255). These variations were in the nature of jockeying for position, accounted for by the fact that prices were not completely independent of quotas.

Articles 18 and 19 of the agreement adopted in 1835 state:

"18th. That the relative prices of every description of coal be fixed by the committee and the representatives of each colliery . . .

"19th. That no colliery, without leave of the committee, shall vary the fixed price agreed upon. . . ."

In practice it worked out as described by Brandling.



in 1800<sup>8</sup> and had not changed much by 1835.<sup>9</sup> Similar principles were applied to the division of each river's quota among the participating collieries. Every colliery got its basis, and the sum of these figures, of course, equaled the river's basis. The absolute magnitude of the bases was not significant, the only purpose of this procedure being to establish the relative size of quotas.

Once the bases were determined, the rest was simple. The United Committee met every fortnight and made certain "issues," that is, gave directions as to how much might be sold as a proportion of the bases.

An imaginary illustration will make this clear. Mr. A. is assigned a basis of 50,000 Newcastle chaldrons. The United Committee meets on the first of the month and decides that the issue for the next two weeks shall be 25 per thousand. This means that within that period Mr. A. may sell 25 chaldrons for every thousand of his basis, or a total of 1250 chaldrons. Mr. B. whose basis is 10,000 chaldrons, will be free to sell only 250 chaldrons in the same period, and so on.<sup>10</sup>

<sup>8</sup> *Report . . . of the Coal Trade*, 1800, p. 557.

<sup>9</sup> *Report . . . of the Coal Trade*, 1836, p. 52.

<sup>10</sup> The process was described as follows by Nathaniel Clayton in 1800: "The Coal owners meet and take account of the general vend of coals for a stated time, generally a year; they add to this quantity a large quantity, one half, perhaps more; they divide this quantity amongst the collieries, allotting a certain proportion to each. The actual vend when ascertained is distributed amongst the collieries in like manner, each part of the actual vend bearing the same proportion to the actual vend as the allotted part bore to the original quantity taken as a basis to the vend." (*Report . . . of the Coal Trade*, 1800, p. 543.)

Brandling's somewhat fuller and clearer description, including the fixing of relative prices, was given to the Committee of 1830: "The proprietors of the best coals are called upon to name the price at which they intend to sell their coals for the succeeding 12 months; according to this price the remaining proprietors fix their prices; this being accomplished, each colliery is requested to send in a statement of the different sorts of coal they raise, and the powers of the colliery; that is, the quantity that each particular colliery could raise at full work; and upon these statements the committee, assuming an imaginary basis, fix the relative proportions as to quantity between all the collieries, which proportions are observed, whatever quantity the markets may demand. The committee then meet . . . and according to the probable demand of the ensuing month they issue so much per 1,000 to the different collieries." (Quoted in the *Report* of 1836, pp. iv-v.)

The account given in an affidavit of one George Ward Errington for 1793 (*Report . . . of the Coal Trade*, 1800, Appendix 41) confirms the view that on the matter of general principles of regulation there was an unbroken continuity.

But on what principles were the relative sizes of quotas fixed? This was one of the most difficult problems the coal owners had to settle and the source of much trouble. It appears that the problem was first attacked in a systematic way when the regulation was re-formed in the summer of 1829. "Up to the year 1829," Buddle told the Committee of 1836,

when regulations had to be formed, the coal-owners met and the quantity to be allotted to each was a matter for discussion; one coal-owner claimed on an idea that his colliery was superior to his neighbors', either in quality of coal or powers of working; but the matter took a more regular shape in 1829, when it was agreed that persons should be appointed to inspect the collieries and to report to the committee their respective powers, qualities of coal, and facilities of working, shipping, etc. Having been so appointed the committee received those reports, and in case any difficulty or difference arose, referees were appointed, and . . . the quantity to be vended was apportioned according to the judgement of the committee assisted by referees.<sup>21</sup>

The criteria adopted in fixing quotas were not laid down in any definite set of rules, but the most important was the capacity of the various collieries to produce. The quality of the coal also played a part, and it appears that the price was used as a convenient index of quality. In so far as this was the case, the price did influence the distribution of quotas; and hence arose that preliminary jockeying for position in the setting of prices before the agreement was finally adopted. But Brandling's testimony makes it perfectly clear that the "powers of working" were the main factor. If two collieries had equal qualities but one had twice the capacity of the other, then the former would get a basis just twice as large. But if their powers of working were equal and their qualities (i.e., prices) different, there was no hard and fast rule. The higher-priced colliery would "no doubt" get a larger basis, but it would not necessarily have any relation to the price differential. When it is kept in mind that, offsetting this pressure on coal owners to get their relative prices up, was another, possibly even stronger, urge to get them down, the justification for the statement made above that quotas were determined on principles which were largely independent of prices charged is amply provided. The urge to get prices down was the one

<sup>21</sup> *Report . . . of the Coal Trade*, 1836, p. 43.

common to all producers burdened with excess capacity. Any coal owner who could persuade the committee that he had a large capacity would want a price at which he could sell his full share.<sup>12</sup>

The factors involved in estimating capacity were enumerated by Brandling as follows:

Extent of the royalty, number of pits, depth of pits, width of shafts, distance of coal from bottom of shaft, inclination of seam, whether the coal is working in whole mine or broken part of mine, whether coal can be wrought with or without the Davy-lamp, distance coal has to be laid from pits to place of shipment, depth of water at place of shipment which included facilities of shipment; all these particulars are elements; but we do not enter into the minute details as to wages paid to the agents and so on.<sup>13</sup>

If the committee, basing its decision on the report of its inspectors, did not fix a basis satisfactory to the colliery concerned, the latter could appeal. The procedure was then for the committee and the colliery owner each to appoint a referee; and if the two referees could not agree, they selected a third whose decision was final.

As has been indicated above, the coal operators were all extremely anxious to get as large a basis as they could. "The profit of collieries depends," said Brandling, "materially on the quantity, because there are certain fixed expenses which the collieries cannot get quit of, namely the agency, and engines, and other contingent expenses."<sup>14</sup> In practice, however, they could rarely get a larger basis without increasing their overhead expenses. This led to an expansion of capacity which a contemporary writer described, perhaps with some exaggeration, as follows:

With this [i.e., the largest possible basis] in view, it was common for them to secure a royalty extending over from five to ten times the surface which it was intended to work, thus burthening themselves with the payment of perhaps £5,000 per annum, or more, of "dead rent" to the owner of the soil, who,

<sup>12</sup> It is significant that in illustrating the responsibility of the committee with respect to relative prices, Brandling chose a case in which a colliery owner was assumed to have fixed his price too *low*. "If the price that they have fixed is lower according to the sales of the preceding year in proportion to the best coals, than it ought to be where they come in competition, the committee would then call on that colliery to fix their coal at the fair price, that is, at the fair proportionate price" (*Report . . . of the Coal Trade*, 1836, p. 3).

<sup>13</sup> *Report . . . of the Coal Trade*, 1836, p. 5.

<sup>14</sup> *Report . . . of the Coal Trade*, 1836, p. 2.

of course, exacted such payment in return for his concession, although his tenants might have no intention of using it. Instead of sinking one or two pits, which would afford ample facility for working the quantity which the mine was destined to yield, a third, and, possibly, a fourth pit were sunk, at an enormous expense, and without the smallest intention of their being used. A like wasteful expenditure was made for the erection of useless steam power, and to complete and give an appearance of consistency to the arrangements, instead of building 200 cottages for the workmen; double that number were provided. In this manner a capital of £160,000 to £200,000 might be invested for setting in motion a colliery allowed to raise and sell only such a quantity of coal as might be produced by means of an outlay of one-fourth or one-fifth of that amount. By this wasteful course the end of the colliery owners was attained; they got their basis fixed — if a large concern, as is here supposed — say at 50,000, and this basis probably secured for them a sale of 25,000 chaldrons during the year, instead of 100,000 chs. which their extended arrangements would have enabled them to raise.<sup>15</sup>

It is perhaps worth noting in passing that in allotting quotas and fixing prices no account was taken of coal sold locally or for export to foreign countries. The result, of course, was to encourage dumping. According to Porter, it was not an uncommon occurrence for foreigners to buy coal at 18s. per Newcastle chaldron when the regulated price was 30s. 6d.<sup>16</sup> Likewise the price of small coal was maintained at a prohibitively high level for the domestic trade but was almost given away to foreigners.<sup>17</sup>

### 3. METHODS OF ENFORCEMENT

The question which obviously presents itself at this point is: How were the coal owners induced or forced to conform to the regulations once they had signed them? Essentially the answer is very simple; it boils down to an elementary question of pecuniary gain. Was it in the interest of each individual that all the others should maintain the regulation? How much chance was there that they would do so if he broke it? The answer to the first question was an emphatic affirmative; to the second, not much chance.<sup>18</sup>

<sup>15</sup> Porter, *The Progress of the Nation* (1851), pp. 281-282. Compare this estimate of the amount of excess capacity with that of the Committee of 1836: " . . . the pits sunk, and the machinery upon them, are capable of affording, easily, double the quantity at present worked" (*Report . . . of the Coal Trade*, 1836, p. xiv). Also see below, Chapter X, where the question of excess capacity is discussed in detail.

<sup>16</sup> *Progress of the Nation*, p. 283.

<sup>17</sup> *Report . . . of the Coal Trade*, 1836, p. 155.

<sup>18</sup> A flagrant breach of the agreement was tantamount to withdrawing without

This is not to say, of course, that individuals could not overstep the strict limits of the agreement without bringing the whole structure crashing about their ears. They could and did engage in what would now be called "chiseling." This took various forms, such as giving overweight (a method of shading prices and exceeding quotas) and freighting vessels to London instead of selling direct to the shipowners as they were supposed to; but by far the most important was exceeding the allowed quantity.

In order to meet these infractions of the rules various devices were employed at different times. First, on the principle that prevention is better than cure, some kind of machinery for settling grievances and thus alleviating the pressure to break the rules was a matter of great importance. This was not provided until 1829 when "the great leading principle" of "impartial reference," already alluded to in connection with disputes between districts and differences over bases, was introduced. "Reference" was given the widest possible scope. Any owner who had any grievance against another owner or against the committee might appeal and secure the appointment of referees, one by himself and one by his adversary, to settle the matter. If these referees failed to agree they appointed a third referee whose decision was final. If, for example, a colliery owner applied to the committee for leave to sell more than his allotted quantity during a certain month<sup>19</sup>

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notice. The effect of such an action, should it occur, was unhesitatingly predicted by Brandling in 1836. He was asked, "Has any party retired without notice?" and he answered, "No; and it would break up the agreement immediately if they did so" (*Report . . . of the Coal Trade*, 1836, p. 10).

Nevertheless, Brandling emphasized that the individual colliery much preferred to be out of the regulation with the others in *if* that were possible. Apropos of a new colliery which had not yet entered the regulation, the following question was put to him: "Supposing they could supply any quantity they could possibly get up in London with a profit, would they enter into the vend?" Brandling replied: "Certainly not, if the other collieries would continue the regulation without their entering into it" (p. 14).

<sup>19</sup> This was very frequently done. I select a couple of examples at random. "Application from the Benwell owners to be allowed to vend 199 cha<sup>s</sup>. for a contract ship loaded this year for a contract made last year. Refused on acct. of its being contrary to the spirit of the regulation." (CT, Nov. 2, 1827.) "Mr. Dunn for Townley applies for extension of Vend for the present month to the extent of 200 cha<sup>s</sup>. Granted." (CT, July 24, 1827.)

and was refused, he might resort to reference. Ordinarily, of course, this was not done on such small matters.

Still, the temptation to break the rules was strong, and actual infringements took up much of the time of the committee. There were two ways of dealing with the problem: first, to subject the wrongdoer to the displeasure of his neighbors whom his act injured; and second, to inflict actual penalties. The first was resorted to both consciously and in more subtle ways and probably was more effective than the second, for the usefulness of the second method was seriously impaired because of the absence of any possibility of coercion. Even the ordinary sanction of a club or political party — suspension or expulsion — was lacking, since to be expelled from the regulation while the others maintained it would have been rather an advantage than the contrary.

The various committees tried to keep a careful check on the quantities sold by all the collieries and on the whole seem to have succeeded in keeping themselves pretty well informed. The Errington affidavit, describing the situation in 1793, relates

that in order to enforce the regulations, the Committee are not satisfied with the promises of the . . . owners . . . to abide by the rules . . . , but the agent . . . employed by the Committee send every half year to the staithmen of each colliery . . . and directs him . . . to appear before a magistrate, in order to attest on oath to his account of the coals sold from his staith during the preceding half year: and . . . that, in order to carry on their plan with the greater secrecy . . . one of the Committee . . . is the person who . . . administers the oath.<sup>20</sup>

This system was much improved by 1836. Brandling told the Committee of 1836 that (1) the staithmen made their regular report, (2) they had the figures from the custom house, and (3) they received reports from "the places where the coals were sold."<sup>21</sup> It is not likely that much bootlegging could take place with such an elaborate system of checking up in operation.

All "overs" and "shorts" were entered in the Committee's min-

<sup>20</sup> A hint that perhaps this system may not have been foolproof is found in a letter from the Duke of Northumberland's agent to one of the staithmen, dated April 9, 1790: "You may give in the full vends, as they will be short of what is allowed this month" (*Report . . . of the Coal Trade*, 1800, Appendix 41). Does this mean that if the vends were over, the fact should not be reported?

<sup>21</sup> *Report . . . of the Coal Trade*, 1836, p. 5.

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ute books, and offenders were summoned to explain. (Naturally to be "short" was not an offense.) Sometime prior to 1800 a system of fines was introduced. The date of this innovation is not known, but apparently it was between 1792 and 1800, for there is no evidence of fines in the detailed description contained in the Errington affidavit. At that time, as in earlier times,<sup>22</sup> moral pressure was relied upon. That it was a strong influence we need not doubt. For example, Thomas Taylor, agent for the Duke of Northumberland, writing to one of his staithmen in 1792, evinced a strong aversion to any violation of the regulation. "I desire you may not vend one chaldron over the allowed quantity," he warned, "as there may be great fault found by so doing."<sup>23</sup>

But with the growth in the number of collieries and more particularly in the size of the social community of coal owners, more impersonal checks were sought in the institution of fines. The system in force in 1800 was described by Nathaniel Clayton as follows: "Those collieries which have sold more than their allotted quantities pay to those who have sold less a certain allowance per chaldron. This allowance is not equal to the profits resulting to the collieries exceeding their vend from the excess. Collieries frequently do exceed their allotted vends."<sup>24</sup> Obviously the system of fines did not work wonders, and in subsequent years numerous alterations in detail were tried, though it seems that never again were fines wholly dropped.

Rules adopted for the Tyne for 1828 were much more strict than those described by Clayton. "Any Colliery exceeding the quantity allowed by the committee to forfeit the full value of the coals so over-vended at the current selling price of such coals." Other fines were: £50 for deviation from price list without leave; £10 for false return; £5 for failure to make a weekly return.<sup>25</sup>

In the same year, 1828, the Wear had other arrangements. The relevant rule was that "a statement of Overs and Shorts shall

<sup>22</sup> Compare with the statement made in Brown's letter to Spedding, Jan. 13, 1749: "There is no obligation in force to oblige them to it [i.e., observe the regulation] more than their word and promises" (p. 30, above).

<sup>23</sup> *Report . . . of the Coal Trade*, 1800, Appendix 41.

<sup>24</sup> *Report . . . of the Coal Trade*, 1800, p. 543.

<sup>25</sup> GT, Nov. 10, 1827.

take place at the end of every month, when those who have vended over the quantity allowed them shall deduct the overs from the issue of the following month, and those that are short shall add the same to the monthly issue."<sup>26</sup>

The Tyne agreement for 1835<sup>27</sup> exhibits altogether new variations. It provides for a fine of 5s. per chaldron for exceeding the allotted quantity by more than 100 chaldrons, or 2 per cent of the basis to finish loading a ship. Other fines provided for in this agreement are: 2s. 6d. for every 100 cwt. over weight given; 5s. for every chaldron sold at other than the list price without leave; £20 for refusal to answer a summons by the committee or duly appointed referees. In order to insure payment a new system of deposits was instituted. Every owner was to put in the hands of trustees a promissory note for £20 on each 1000 of his basis. And finally the committee was empowered "to fix the amount of fines in every case not specifically provided for."

In commenting on this agreement, Brandling told the Committee of 1836 that in fact no fines had been paid, though there was "perhaps not an individual" that did not at some time exceed his allotted quantity. In each case the owners were able to "satisfy the committee there was a reasonable cause for doing so, and not with a willful intention to defraud their neighbors." He also testified that the deposit system had been allowed to lapse.<sup>28</sup>

These were years of relative peace for the regulation, and some laxity in dealing with offenders could be tolerated so long as it was equitably dealt out. But towards the end of the thirties the committees began to tighten up and impose fines. For example, a fine of £341 15s. was levied on Heworth Colliery for accumulated overs,<sup>29</sup> and numerous other fines of comparable magnitude were imposed. A great deal of difficulty was experienced in collecting the money, but since ultimate success or failure was

<sup>26</sup> "General Regulations for the government of the Coal Trade on the River Wear—as agreed on 15th Feb. 1828." This document is preserved among a miscellaneous collection in the Newcastle Institute.

<sup>27</sup> See Appendix B.

<sup>28</sup> *Report . . . of the Coal Trade*, 1836, p. 9.

<sup>29</sup> CT, July 6, 1839.



not recorded in the minute books there is no way of knowing how much was actually taken in.

New and stricter rules were adopted in 1842.<sup>80</sup> With respect to overs, *in addition* to the provisions of 1835, the monthly excess was to be deducted from the issue of the following month, but if the excess was in fact reduced in this way, and on the quantity by which it was reduced, the fine was to be only 2s. per chaldron instead of 5s.

#### 4. CONTROL OF THE LONDON MARKET

The question of the relation of the northern coal owners to the London market was one of considerable importance to the functioning and effectiveness of the Limitation, particularly on the reconstitution of the latter after the "fighting trade" of 1833. Furthermore, it is the more necessary to devote some space to a clear exposition of this relationship since it has received a rather confused treatment at the hands of Levy,<sup>81</sup> the accepted authority on the Limitation.

Levy speaks of the London market as controlled by what he calls the "Coal Ring," made up of the factors, of whom there were at no time more than about two dozen. Levy appears to believe that the factors were independent buyers of coal,<sup>82</sup> that they were closely organized in such a way as to exercise an important influence on the market price, and that they pocketed the lion's share of the middlemen's profits. He offers no evidence in support of these views, and in fact they are in part wholly mistaken and in part seriously misleading.

The facts are that the factors were agents working on commission for the northern owners and the shipowners. They handled incoming cargoes and arranged sales to the first buyers. Prior to the Act of 1831 all cargoes were required to pass through this channel, that is to go through the Coal Exchange, which was made up of factors and buyers; and even after that date the amount which was not handled by factors was not very important. But there is

<sup>80</sup> GTTW, Aug. 2, 1842.

<sup>81</sup> *Monopoly and Competition*, pp. 127-132.

<sup>82</sup> "... factors, who were in London the first buyers" (p. 128).

no very convincing evidence of collusive action among the factors prior to 1834 and, as we shall see, even after that date it was certainly not a question of independent action on their part. For the period covered by their study, Ashton and Sykes can find very little to charge the factors with.<sup>33</sup> The same could not be said about the first buyers;<sup>34</sup> but since there was at no time any link between the buyers and the northern cartel, we need not concern ourselves with their activities.

Though the coal owners did not take an active interest in the affairs of the London Coal Exchange prior to 1834, the problem was broached to them at least as far back as 1826. A "most numerous meeting of the ship owners of the Port of Newcastle," held on October 24, 1826, authorized a communication to the coal owners to request coöperation in the hope of improving the state of the trade and to announce that a deputation of shipowners would call on the coal owners with this end in view.<sup>35</sup> Soon afterward the coal owners of the Tyne assembled to meet this deputation and heard the view expressed by its leader that low prices were due "to want of a proper understanding amongst the Coal Factors in London." The meeting politely thanked the shipowners and declared itself in favor of anything likely to help the trade.<sup>36</sup> The matter was then turned over to the Tyne Committee for more specific recommendations.

The Committee finally got around to replying to the shipowners in February. Its tone was cool, not to say threatening. The abolition of freighting was uppermost in its mind, and in view of this aim, the Committee felt it "of the greatest importance that no steps should be taken that might lead the Factors to suppose that they are not entirely the agents of the shipowners." The coal owners therefore declined to interfere on the Coal Exchange. The communication closes with a warning: the present arrangements are quite satisfactory, and "*the Coalowners are determined to carry into effect the object for which they are united.*"<sup>37</sup>

<sup>33</sup> Ashton and Sykes, *The Coal Industry*, pp. 221-222.

<sup>34</sup> See Ashton and Sykes, *The Coal Industry*, pp. 219-221. Also Dale, *Fellowship of Woodmongers*.

<sup>35</sup> Letter pasted into the General Minute Book and dated Nov. 2, 1826.

<sup>36</sup> GT, Nov. 6, 1826.

<sup>37</sup> CT, Feb. 20, 1827. The words italicized are underlined in the original.

Within the next few years things changed a great deal. In 1831 active direction of the Coal Exchange passed into the hands of its members. The railroad and nearly two years of open trade<sup>38</sup> had brought prices down. Whether or not the relations between the owners and factors changed during this time is not known; but at any rate the owners came to have quite a new attitude about their own responsibilities with regard to the London market.

The first sign of an active interest in the affairs of the Coal Exchange was evinced at a meeting of the United Committee held on March 7, 1834. Strong dissatisfaction was expressed with the conduct of business in London and the unsatisfactory state of affairs was attributed to "the want of unanimity and a proper understanding amongst the Coal Factors." Further dissatisfaction was voiced with the market information sent to the north, particularly on the question of unsold ships lying in the pool.<sup>39</sup> Brandling, then in London in connection with the overseas duty, was to be sent a copy of the minutes of this meeting with instructions to take measures to remedy the evils noted. Apparently Brandling established contact with the factors, for from this time on communications from and to the factors are frequently recorded in the Committee's minute books.

At a meeting of May 17, 1834, a long document was prepared for transmission to the factors. It begins by declaring that the purpose of the coal owners is to procure moderately remunerating prices with as little fluctuation and range of variation as possible. After stressing the desirability of the factors' combining their individual efforts towards this end, and disclaiming all intention of interfering with the responsibility or limiting the discretion of the factors, it goes on to urge them to constitute themselves as a committee, with a chairman and such rules as may best conduce to carrying into effect the following aims:

- (a) The coal owners to have a paid agent in London.
- (b) The factors to supply said agent each market day at 10 A.M. with full information about ship arrivals and unsold ships, with a £5 penalty for any failure to conform.

<sup>38</sup> Seven months in 1829, the whole of 1833, and two months in 1834.

<sup>39</sup> "The pool" was that part of the Thames extending from Limehouse-hole to London Bridge.

(c) The agent to draw up a general schedule to be laid before the board of factors.

(d) The board to meet every market day at 12 o'clock and, on the basis of this information, determine their prices for the day.

(e) Not later than 3 P.M. each market day all factors to report prices and quantities sold to the agent, with another £5 penalty for failure to conform.

(f) The agent to prepare immediately a statement of the day's transactions and dispatch it to the various ports in the north.

Forms for the provision of these various kinds of information were then attached.

Despite the disavowal of any intention to interfere with the business of the factors, it is clear from the high-handed and dictatorial tone of the whole document that the owners regarded the factors as merely their agents to be ordered about as they might see fit. The nature of the power which they wielded over the factors is not clear, but it seems probable that the owners, on selling coal to the ship-master, were in the habit of directing which factor should handle it.<sup>40</sup> In this way, the owners had it in their power to boycott any recalcitrant factor and bring him into line.

Be that as it may, the factors appear to have been quite ready to coöperate. They called a meeting on June 3, 1834, at which the following resolutions were adopted:

That the factors being desirous of meeting the wishes of the coal and ship-owners to devise some plan of checking the fluctuation of prices which frequently occur by pressing sales, when a larger supply of coals happens to arrive than the actual demand of the day requires; it was

Resolved, That whenever a greater number than 80 ships reach market on any one day, the factors shall offer them for sale according to rotation of entry, and that not more than 40 of such ships shall be offered for sale on one market day, unless the prices of best coals be 20s. or upwards, and in that case to be at liberty to sell such further number of ships as each factor may judge proper, giving to every vessel with the same coals her fair and regular turn of sale; by which arrangement the ships will experience little or no detention, and the evil will be avoided of pressing for sale at a reduced price a larger quantity of coals than the average demand of the market requires.

<sup>40</sup> Brandling told the Committee of 1836, "If you were to come to my office and ask me whether I would sell you coal or not? I should say certainly, and my price is so and so, provided you choose to go to my factor. My property is only safe in that gentleman's hands, and if you do not choose to go to him, you may go and buy your coals elsewhere." (*Report . . . of the Coal Trade*, 1836, p. 21.)

There then followed two resolutions designed to satisfy the owners' demand for better market information, and finally one "that the foregoing resolutions be laid before the coal-owners for their concurrence, and in the event of such resolutions being approved of, the coal-owners be requested to endeavour to obtain also the sanction of the shipowners to the same."<sup>41</sup>

The coal owners received this answer favorably, but resolved "that 50 ships should be substituted for 80 in the second resolution of the Factors," thus making the system more strict.<sup>42</sup> The scheme was soon thereafter put into practice and became from that time on an integral part of the Limitation of the Vend.

On July 5 the Tyne Committee directed that each colliery should post a notice informing shipowners that coals would be sold only to those who complied with the factors' regulations in London as to turn of sale. It was not easy to induce all the shipowners to fall into line, since complying with the factors' regulations might entail a long and unprofitable wait in the pool. The coal owners consequently resorted to the practice of requiring captains to sign a statement promising to observe the regulations before loading them with coal;<sup>43</sup> and when this did not suffice, they resolved to boycott all ships reported to them by the factors as evading the regulations. Since it was illegal to refuse unconditionally to load a ship, the method adopted was to raise the price to offenders.<sup>44</sup>

The regulations were somewhat altered at a meeting of factors held on Jan. 30, 1835, at which the following resolution was adopted: "Resolved, That on any market-day, when the price of the best Sunderland coals has been 21s. or less on the previous market, the number of cargoes to be offered for sale shall be 40; when 21s. 3d. or 21s. 6d., shall be 50; when 21s. 9d. to 22s., shall be 60; when 22s. 3d. shall be 70." This principle of a sliding scale was henceforth adhered to, with the scale itself subject

<sup>41</sup> A copy of these resolutions was put in evidence before the Committee of 1836 by Robert Clarke, a factor (*Report . . . of the Coal Trade*, 1836, pp. 31-32).

<sup>42</sup> CTTW, June 17, 1834. This meeting was attended by delegates of the ship-owners from the Tyne and Wear who expressed approval of the plan. The ship-owners appear to have had some kind of organization in each port, but there is no evidence that it exercised any monopoly powers.

<sup>43</sup> CTTW, Aug. 30, 1834.

<sup>44</sup> CTTW, Nov. 24, 1834.

to occasional alterations to meet general changes in the price situation.<sup>45</sup>

The Committee had continually to fight against violations of the regulations, but the persistence and energy with which it prosecuted the task prove both the importance of the scheme for the cartel and the fact that it must have been in the main successful. The minute books are dotted with reports of ships which have violated the rules and resolutions condemning the practice. The methods employed to combat violations are perhaps best illustrated by a few examples which were described to the Committees of 1836 and 1838.

The first is that of Mr. Dyer, owner of two colliers, the *Lavinia* and the *Olive Branch*.<sup>46</sup> Dyer would not allow his ships to conform to the factors' regulations. Late in 1834, Mr. Scott, secretary to the factors, wrote to Newcastle stating that Dyer's boats had not waited their turn as prescribed in the regulations. Thereupon commenced a whole series of difficulties each time Dyer's captains tried to load their boats.

On one occasion the *Olive Branch*, being refused the best coals in Sunderland, hastened to Seaham, where it was loaded during the night. When the agent of the mine owners had finished loading it, he discovered it was the wrong ship and was "very much displeased." On another occasion the *Olive Branch* was given a cargo of Russell's Lyon's Wallsend on the understanding that its captain would wait his turn in London. But when the vessel got to London, Dyer "took the coals himself, and went to work directly." The captain on the next trip went to Hartlepool, where he got a cargo on condition the vessel should go to Chatham. He actually did go to Chatham but could not make a good bargain there and so proceeded to London after all, though this was precisely what he had agreed not to do. On this trip he had written to Dyer:

I will be able to get a cargo . . . ; but it is just as I thought it would be. I shall have to tell a hundred lies; indeed I think that I shall contract such a habit of lying that I shan't be able to give it up. We have not only factors

<sup>45</sup> The scale at various dates may be found in the *Report . . . on the Coal Trade (Port of London) Bill*, 1838, p. 7.

<sup>46</sup> The following account of Dyer's troubles is taken from his evidence before the Committee of 1836 (*Report . . . of the Coal Trade*, 1836, pp. 182-191).

and coal-owners to contend with, but a whole host of ship-owners, that are compelled by their connection with factors to chime in with the present shameful regulations; and to show their attachment to the cause, fall foul of me; but I have stopped a few of their mouths by telling them there is a bill pending in parliament to put a stop to all illegal combinations.

On another occasion the master of the *Olive Branch* wrote:

This will inform you that I have loaded the *Olive Branch* with Stobarts' Wallsend, and was in a measure compelled to do so, as Mr. J. Carr, not content with not loading the ship himself, prevented me from getting a cargo of Stewarts' Eden Main; and when he found that I had got a cargo of coals he was stamping mad. . . . Ridley captain of the *Lavinia* got in last tide, but don't think that he will get any coals, for J. Carr says that he will take care that neither the *Lavinia* nor me gets any coals another voyage, not even small.

That was in December 1834. In March 1835 he wrote that "they have regularly proscribed the two ships go where they may for the best coals," and informed Dyer of a probable opportunity to sell the *Olive Branch*.

Soon after this, Dyer was not able to get even very inferior coals at Stockton and Sunderland, and only one colliery at Newcastle would load him. He had taken to going to Scotland for Elgin coals, and sending cargoes to Jersey, Guernsey, and abroad, destinations with respect to which no regulations applied.

Thus the cartel succeeded in driving a consistent offender right out of the trade. Dyer could see nothing blameworthy in the methods and ethics of his captains. He regarded the combination of the factors as illegal and thought that his captain "was obliged to fight them with their own weapons." Despite this argument, his hearers on the Committee appeared to be properly shocked at such business morals, and probably thought he deserved no better fate than he had met with.

Another ship that consistently violated the factors' regulations was the *Eliza*, owned by James Thompson and captained by Thomas Young. Thompson testified before the Committee of 1838 that

since the factors' and owners' regulations have been in force we have been continually harassed and subjected to very great inconvenience in consequence of our not conforming to those regulations; I believe I was amongst the first who found it necessary to depart from them, on account of my finding it much to my disadvantage as a ship-owner. I had customers of my own whom

I was desirous of dealing with; and my object was, to go backward and forward with a cargo with as little delay as possible; in consequence of which, I was enabled to take a trifle less for my cargo than I otherwise should have been enabled to do.

In 1837 Captain Young brought suit against one of the fitters for refusing him a cargo on any terms whatever, which was in contravention of the Turn Act applicable to the Tyne. The case was compromised out of court, but it taught the owners to be careful not to refuse point blank, but only to discriminate in price.<sup>47</sup>

Late in 1838, Young had an interview with the Lord Mayor of London who was at that time crusading against the coal monopoly. After Young had related his troubles with "the monopolists," the Lord Mayor asked him, "I trust you are succeeding in your opposition against the combination?" "I have not the least doubt that it must soon fall to the ground," replied Captain Young. "I procure all my coal from other collieries, which are not connected with the combination, a great many of which are now at work."<sup>48</sup>

There is no doubt that the combination was showing signs of weakness, and it is quite probable that during its last years increasing opportunity was offered to adventurous shipowners to avoid its strict limitations. But still the great majority of the shipowners were content to conform.<sup>49</sup>

The effect of the regulations on the shipping trade is not difficult to predict on the basis of a few simple notions of economic theory. Assuming that the effect of the regulations was to keep the price in London up and the spread between the Newcastle and London prices greater than it would otherwise have been, we should expect that a greater profit would be realized per voyage.

Further, assuming the coal-carrying part of the shipping industry to have been in equilibrium with other branches, we should expect

<sup>47</sup> *Report . . . on the Coal Trade (Port of London Bill)*, 1838, evidence of Robert Gills, Assistant-Secretary to the Newcastle Coal Trade, pp. 91-92.

<sup>48</sup> Bell Collection, vol. VIII, p. 487.

<sup>49</sup> Gills testified that between March 1837 and March 1838 altogether 184 vessels were reported for violating the regulations (*Report*, 1838, p. 112). This, of course, may include the same ship on more than one trip. Since the number of sailings to London in the year 1837 from Newcastle, Sunderland, and Stockton was 7,979, it can be seen that the extent of violation was relatively quite insignificant. On the number of sailings see "Report of Committee E," 1871, p. 43.



more ships to be attracted to coal carrying and new ones to be built. This would tend to proceed until the delay attendant upon delivering coal had grown so great that the loss from waiting just offset the greater price spread between the north and London.

In fact, something very like this appears to have taken place. Thompson estimated that without the regulations colliers could on the average make about one third more voyages than they were making, that this would be more transportation capacity than the trade could use even with a fall in prices, and that consequently some ships would have to seek another trade.<sup>50</sup>

More convincing still as to the effect of the factors' regulations is the statistical evidence on the number of ships at market in relation to the number of ships sold.<sup>51</sup> The higher the former in relation to the latter, the longer the wait in the pool. I have selected two tests, which, taken together, appear to me to be quite conclusive.

TABLE 4  
SHIPS AT MARKET AND SHIPS SOLD, 1834

<i>Month</i>	<i>Price</i>	<i>Ships at Market</i>	<i>Ships Sold</i>
January .....	19/3 .....	94 .....	40
February .....	18/6 .....	95 .....	45
March .....	17/6 .....	176 .....	62
April .....	20/3 .....	133 .....	35
May .....	19/9 .....	90 .....	48
June .....	19 .....	53 .....	25
July .....	19/9 .....	167 .....	37
August .....	20/3 .....	181 .....	45
September .....	21/3 .....	176 .....	57
October .....	21 .....	189 .....	57
November .....	24 .....	52 .....	43
December .....	23 .....	80 .....	37

First, let us examine the figures for 1834, the year in which the regulations were instituted. The figures in Table 4 relate to the first market day of each month. Several things about this table call for explanation, though in the main it tells its own story. First,

<sup>50</sup> *Report . . . on the Coal Trade (Port of London) Bill*, 1838, p. 21.

<sup>51</sup> The figures were supplied to the Committees of 1836 and 1838 by James Bentley, a factor (*Report . . . of the Coal Trade*, 1836, pp. 68-70; *Report . . . on the Coal Trade (Port of London) Bill*, 1838, pp. 76-78).

the sharp rise in price between March and April is accounted for by the re-formation of the regulation in the north after a long period of open trade. Second, the blank line divides the months during which the factors' regulations were in effect from those during which they were not. The conclusion is inescapable that the factors' regulations were important in raising the price and in delaying the ships in the pool.

Even more convincing is Table 5, which gives the average number of ships at market and ships sold on the first market day of

TABLE 5  
SHIPS AT MARKET AND SHIPS SOLD, 1833-1837

<i>Year</i>	<i>Price</i>	<i>Ships at Market</i>	<i>Ships Sold</i>
1833 .....	18/4 .....	75	38
1834 .....	20/4 .....	124	44
1835 .....	21/8 .....	193	49
1836 <sup>a</sup> .....	22/10 .....	202 (186)	51 (54)
1837 <sup>a</sup> .....	23/9 .....	217 (240)	54 (54)

<sup>a</sup> One extreme item has been excluded in each of these years. If these items were included, the figures in parentheses would be correct.

each month for the years 1833-37. It seems a reasonable conclusion from the data presented in Tables 4 and 5 that the factors' regulations were a potent instrument for raising prices as well as for accomplishing their avowed purpose, namely, to even out fluctuations.

## 5. PRICE AND OUTPUT POLICIES

So far attention has been confined for the most part to examining the structure and methods of the Limitation of the Vend. We have seen how it was organized on the various rivers, what the relation of the rivers to one another was, by what methods it was sought to enforce the decisions of the directing committees, how control was exercised over the London market, and so on. But we have not inquired at all as to the general policies pursued within this framework. More specifically, what criteria governed the price and output policy of the Limitation?

Fortunately it is not very difficult to provide an answer to this

question. The general considerations governing price and output policy were simple and few in number; and Brandling explained them with perfect frankness to the Committees of 1830 and 1836.

The aim of the Limitation was to fix a price which would enable coal to be profitably carried to London and sold at a price just under what the coal could be acquired for elsewhere. This was in Brandling's opinion "a fair price; that is, a price a little below what the consumers can get the same article for elsewhere." It was also the "best price we can get." "Our price is as high as we could possibly raise it to by any agreement we could make with safety to ourselves," that is, without attracting dangerous competition from Scotland, Wales, and Yorkshire. These were Brandling's remarks in 1830.<sup>52</sup> He was no less explicit in 1836.

"Does not the agreement which you have entered into," he was asked, "keep up the price of the coals to the consumer in London, to that point which will just meet the competition from Scotland, and the other places?"

"Exactly so," replied Brandling. "That is the point we aim at, and that is the point we consider ourselves justified in aiming at."<sup>53</sup>

A little later on, another exchange between the chairman and Brandling emphasized the same point.

Q. — Am I right in supposing the measure of your power of self-protection is the price at which other coals can be supplied to the London market?

A. — Decidedly.

Q. — While you keep within that, you can control the price in London?

A. — We can so far control the price in London that we can raise our coals up to that price.

Q. — Your desire is to keep it up to the highest pitch you can, subject to the competition you would otherwise let in? A. — No doubt.<sup>54</sup>

Given this aim of price policy, output policy naturally followed. The price of best coal in the north was determined in a rough way by subtracting from the "fair" price in London the average freight rate at any given time. Once the prices in the north had been fixed in this way, they were not changed for a full year, and it remained only to adjust quantities so that the price in London did not fluctu-

<sup>52</sup> *Report . . . of the Coal Trade*, 1830, pp. 254-255, 263.

<sup>53</sup> *Report . . . of the Coal Trade*, 1836, p. 12.

<sup>54</sup> *Report . . . of the Coal Trade*, 1836, p. 13.

ate either too much above or too much below what would just suffice to exclude serious competition from other districts. As Brandling put it, "If we see by the markets in London that the price in the pool has exceeded the price we consider to be the fair price, we issue a large supply; if it is below that, we consider the supply is more than the demand requires, and we diminish it."<sup>55</sup> He added that "the price in London is the only guide as to the quantity issued by us," but this appears to be something of an oversimplification, since he had already admitted in 1830 that "the view the Committee takes of the probable demand for the ensuing month" as well as "the quantity on hand," i.e., lying in unsold ships in London, played a role.<sup>56</sup> The concern the Committee had shown in its negotiations with the factors for full and accurate market information reinforces the view that the Committee's decision was not taken exclusively on the basis of the current price.

Obviously a misjudgment as to the proper price at the pit might make it rather difficult to carry out this policy until the mistake could be rectified. According to Brandling, this is what happened in 1828:

In the regulation in 1828 we found we had fixed our prices too high; the consequence was it created an immediate influx of coals from Scotland, Wales and Yorkshire, and more especially from Stockton; so that when the coal-owners met together, to enter into another arrangement last year, we were obliged to fix our prices a little lower, upon the average 1s. a London chaldron.<sup>57</sup>

<sup>55</sup> *Report . . . of the Coal Trade*, 1836, p. 2.

<sup>56</sup> *Report . . . of the Coal Trade*, 1830, p. 264.

<sup>57</sup> *Report . . . of the Coal Trade*, 1830, p. 255. The following comparison of imports into London and the average price of Stewarts' Wallsend for 1828 and 1829 throws light on this statement. It should be noted that a large part of the trade of 1829 was open trade which accounts for the considerable price drop. The quantities are from a table given in by Pearsall to the Committee of 1836. For the prices see Appendix A. (The quantities are in thousands of tons; the prices are

	<i>From Vend Area</i>	<i>From Outside</i> (Stockton, Scotland, Yorks, Wales)	<i>Price</i>
1828 . . . . .	1,862 . . . . .	98 . . . . .	30
1829 . . . . .	1,964 . . . . .	53 . . . . .	27.5

shillings per ton.) It will be seen from these figures that the degree of competition, even in 1828 was not very serious.

The quantity of coal reaching London by inland routes was at this time quite negligible. For example, the amount in 1835 was only 1,005 tons (*Report . . . of the Coal Trade*, 1836, Appendix 18).

The rationale of this price and output policy is quite evidently that which economists are in the habit of assuming in the case of monopolists, namely the desire to maximize immediate profits.<sup>58</sup> The northern owners were decidedly of the opinion that the short-run elasticity of demand for their coal in the London market was very low<sup>59</sup> up to a certain price where competition from outside became serious. Except under freak cost conditions, which assuredly did not obtain, the "rational" monopolist would choose this special price, or rather a very little under it, which is precisely what the leaders in the Limitation aimed at.

The crux of the matter, of course, was the estimate entertained by the owners with regard to the elasticity of demand for coal, and hence it may not be amiss to investigate briefly what they said on the subject. No attempt has been made to collect all the statements which might bear on the problem, but only a few, which seem to be representative, are taken from the evidence of 1836.

In the first place, it is clear that their views were for the most part determined by their experience of years of open trade, during which prices regularly suffered a serious decline while the effect on quantity did not seem to be at all predictable, sometimes going one way and sometimes the other.<sup>60</sup> One writer described it as follows: "Open trades have shown no increase of vends whatever, or such a variation only, as may be ascribed to the accidental difference of one year's demand from that of another."<sup>61</sup> Naturally enough, the inference to be drawn from this observation was that, at least for a short period, there was not much relation between price variations and changes in quantity sold — in other words, that the elasticity of demand was not much different from zero.

Brandling said as much quite plainly. On being asked: "Must

<sup>58</sup> In reality this is not the usual assumption of economists, though most of them believe it is. For some reason economic theory has never developed the concepts of long- and short-run demand curves. If it had, we should perceive at once that most monopoly theory runs in terms of long-run demand curves (and cost curves) and hence is concerned with ultimate maximum profits and not with immediate maximum profits.

<sup>59</sup> If it was low in London it was, of course, much more so in Newcastle; since, assuming no change in freights, a given percentage change in price in London corresponded to a much greater percentage change in Newcastle.

<sup>60</sup> For a fuller discussion of the effects of open trade, see below, Appendix A.

<sup>61</sup> Taylor, *Observations*, p. 38.

not the price, on the average of the year, depend on the quantity brought for the use of the consumers?" he answered: "No, I think it depends entirely on the competition." To be sure, he admitted that this would not be the case in the long run — "no doubt the cheaper the coals are the more coals will be consumed; I mean more will be consumed *if coals can be made permanently cheaper*"<sup>62</sup> — but, then, the Limitation was not concerned with doubtful calculations about the long run.

Bentley, a very intelligent factor, was asked: "Do you sell the greatest quantity of coal when the price is cheap or when the price is dear?" "I really do not believe that it makes any difference," he replied. "Except that they may go a little further inland, by which the sale would be increased; . . . persons of opulence are not guided by the price, and poor people only burn coal to any extent during the severe weather."<sup>63</sup>

Henry Morton, principal agent to the Earl of Durham, had not thought about the matter much. To the query, "If prices were cheaper, would you not sell a larger quantity?" he replied, "I do not know."<sup>64</sup> The answer does not suggest that, if cornered, he would have assigned a very high value to  $\eta$ !

Thomas Wood, the one coal owner who expressed views widely differing from those of the official cartel representatives, thought that as far as the Hetton Colliery was concerned, a reduction in the London price from 28s. 6d. to 24s. 6d. would entail an increase in vend from 110,000 to 150,000 chaldrons.<sup>65</sup> This would be an elasticity of demand in the neighborhood of 2.5. But Wood made it quite clear that he was thinking in terms of the best coals' benefiting at the expense of the inferior grades and not of any great general increase in the consumption of coal. Wood was in favor of the dissolution of the cartel and wanted to show that the producers of best coal would stand to gain by such a move.

These opinions about the nature of the demand for coal were all given on the spur of the moment and were probably none of them the result of careful thought on the subject. Nevertheless, we do

<sup>62</sup> *Report . . . of the Coal Trade*, 1836, p. 28. The italics are mine.

<sup>63</sup> *Report*, 1836, p. 76.

<sup>64</sup> *Report*, 1836, p. 84.

<sup>65</sup> *Report*, 1836, p. 175.

have a reasoned expression of opinion, written the year after the final collapse of the Limitation, which represents a clear statement of what the other and less articulate owners would doubtless have fully endorsed.

Why do not low prices induce greater consumption? This was the form in which the question presented itself to Taylor.<sup>66</sup> After observing that "it must of necessity be always extensively used, and . . . *there is certainly no cheaper substitute, even at much higher prices than the highest regulated ones ever known,*"<sup>67</sup> he goes on to analyze the different sources of demand. First, coal as a consumers' good: As to the poor, they buy coal in very small quantities and even a change in price of several shillings per ton appears to them as a variation of less than a farthing on a fourteen-pound bag. Given the importance of heat, it seemed to Taylor most unlikely that such an amount would induce any important change in the demand. As for the rich, price considerations scarcely play a part in their demand for such articles as coal. Second, coal as a producers' good: The large producer, with given plant and equipment, has definite requirements which do not depend on the price at all; while when it comes to opening new plants, larger considerations than the price of coal govern such decisions. He concludes, emphatically, "*The result plainly is, that by a regulation price is maintained, without any aggregate sacrifice of quantity.*"<sup>68</sup>

## 6. OTHER POLICIES

The coal owners used the organizational machinery of the Limitation of the Vend for purposes other than just raising the price and restricting the output of coal. In particular it was a kind of employers' association for dealing with the miners. Also it was the channel through which they did their lobbying and carried on their efforts to influence public opinion. Strictly speaking, we ought next to analyze the policy of the Limitation in these various respects. The fact is, however, that there are nowhere to be found

<sup>66</sup> *Observations*, pp. 43-44.

<sup>67</sup> Italics in original.

<sup>68</sup> Italics in original.

clear-cut statements of policy on which we could center such an analysis, and consequently the task would require an examination of a number of specific cases as a basis for generalization. But in our description of the Limitation in action from 1827 to 1845, we shall have occasion to notice these special cases in considerable detail, and it would seem preferable to complete our knowledge of various specific policies as we proceed.



## CHAPTER IX

### THE LIMITATION IN ACTION, 1827-1834

#### I. THE YEAR 1827

WE HAVE, so to speak, reconstructed the skeleton of the Limitation of the Vend, and our next task is to attempt to put some flesh and blood on the bones. That is to say, we must see how it worked out and what kind of activities it engaged in in every day practice. This will be accomplished by a running account of the Limitation, based on the minute books already described, from 1827 to 1834. These were, in many ways, the most eventful years in the whole life of the cartel.

The year 1827 was a quiet one, the last before a long series of disturbing events. It may be said to have brought to a close what later came to be looked back upon as the golden era of regulation: "the era of large individual vends — of vends which it may fairly be said, were unnaturally large."<sup>1</sup>

For the most part the time of the Committees which managed the Limitation was taken up with unexciting routine work which may be characterized under the following headings: fixing issues, overs and shorts, petitions for indulgence, minor adjustments in bases, binding and hiring,<sup>2</sup> waging war on the coal taxes, opposing excess measure. Two persistent general tendencies that manifested themselves in this sort of work may be noticed. First, petitions to exceed allotted quotas stood a much better chance of being granted if the excess was destined for the coasting trade rather than for London. The London market was the real plum and no one was allowed to spoil it. Second, there was a high inverse correlation between the amount of the issues and the strictness of the Committees' efforts to enforce observance. When the issues were up and trade brisk, the Committees tended to wink at

<sup>1</sup> Taylor, *Observations*, p. 25.

<sup>2</sup> Important decisions on labor questions were left to the general meetings; their execution, however, was entrusted to the Committees.

small breaches of discipline; but when demand fell off, erring members were sharply reminded of their obligations.

During the year 1827, the Tyne Committee undertook to bring the shipowners more under the control of the cartel than had previously been the case, and at the same time, it attempted to make use of the shipowners as a weapon against unaffiliated or recalcitrant collieries. It is not possible to ascertain how successful the maneuver was, but at any rate it is interesting as an example of method.

First, resolutions were passed with a view to forcing ships to deal only with collieries in the regulation. "Resolved that 10s. per chaldron in addition to the list price, be charged to any ship, not trading regularly with one or other of the associated collieries." This information was to go to the shipowners — it had to if it was to be immediately effective — but it would be bad if it were noised abroad that the Committee was using methods of coercion. Hence secrecy: "Resolved that the above resolution be communicated to Mr. Cockerill for the information of the ship-owners — such communication to be made by him verbally and that he be requested not to allow any copy of the resolution to be taken."<sup>3</sup>

There was thus created a list of collieries which were proscribed. It soon occurred to the Committee that this list might be made to serve other purposes. Thus when Seghill Colliery made what the Committee regarded as unreasonable demands, the latter threatened to add its name to those with which the shipowners could not safely trade.<sup>4</sup> And a little later attempts were made to explain to the shipowners that it was all in their own interest; only if they coöperated with the regulated collieries would prices be kept up in London.<sup>5</sup>

The shipowners were either impressed or intimidated, for they sent in asking for exact information; they wanted "to be furnished with the names of those collieries which are not in the association," intimating that they were ready to coöperate. The Committee agreed to give this information, but on the understanding that it be regarded as strictly confidential.<sup>6</sup> We may judge that the scheme

<sup>3</sup> CT, June 19, 1827.

<sup>4</sup> CT, Aug. 2, 1827.

<sup>5</sup> CT, Aug. 4, 1827.

<sup>6</sup> CT, Sept. 5, 1827.

did not work very well, for with this last entry it drops from the minute books, never to return.

The United Committee first took up the problem of renewing the regulation for the next year early in the autumn,<sup>7</sup> and a month later the owners of the Tyne in a general meeting unanimously voted a regulation for 1828 and adopted a set of rules. These rules, according to the usual procedure, were then to be left in the Coal Trade Office for every one to sign, and communicated to the Wear owners.<sup>8</sup>

A new agreement meant a new chance to get a larger basis, and the work of revising the lists started at once. Four new collieries which had opened in 1827 had to be provided for, besides a multitude of claims and counterclaims which had to be sifted and compromised as amicably as possible. As usually happened, this process could not be completed by the beginning of the year. A second general meeting was called at the last moment and it was decided that the old bases should be acted upon until the new could be prepared.<sup>9</sup>

## 2. THE YEAR 1828

A difference of opinion between the two rivers arose over the bases for 1828. The Tyne felt that its vend should be considerably increased, and objected to the practice of the Wear in not counting small coal in its regulated quantities.<sup>10</sup> "The Wear gentlemen" held a twice-adjourned meeting to consider the Tyne's claims and finally offered a compromise which was accepted. The Tyne was to get a slightly larger basis; the Wear would include small coal.<sup>11</sup>

An old question cropped up in 1828, namely that of the keelmen and the spouts. The spouts, by means of which coal could be loaded directly into the seagoing colliers, were gradually forcing into idleness more and more of the keelmen, who fought back valiantly against their mechanical foes. Sometimes they struck and rioted, but in 1828 they were engaged in the peaceful pursuit of bringing suit against the owners of Wallsend Colliery for main-

<sup>7</sup> CTW, Oct. 2, 1827. This was the general practice.

<sup>8</sup> GT, Nov. 10, 1827.

<sup>9</sup> GT, Dec. 31, 1827.

<sup>10</sup> CTW, Jan. 4, 1828.

<sup>11</sup> CTW, Jan. 19, 1828.

taining an obstruction to navigation in the river Tyne. The owners of the district, with their characteristic understanding of the importance of collective action, promptly rushed to the aid of their threatened neighbor. The suit, to be sure, was a specific attack on the Wallsend spouts; but suppose it should be successful? Would they all then have to return to the more expensive method of keel loading? Better that the question should never come up. It was decided that the suit should be defended at the general expense of the Tyne trade. They were also of the opinion that such ungrateful action on the part of the keelmen should release the owners from their existing legal obligation to support the keelmen's hospital.<sup>12</sup>

Another incident of 1828 throws light on the philosophy behind the Limitation of the Vend. An Act against the issuance of £1 notes had been passed by Parliament and was to go into effect in 1829. The Tyne owners met and approved a lengthy petition asking for the repeal of this Act.<sup>13</sup> The real reason, of course, was that the disappearance of £1 notes would entail a very considerable inconvenience and expense in the conduct of their business; but it was necessary to buttress this argument with eternal economic principles, and when it comes to basing one's argument on economic principles it is usually wiser to choose popular rather than relevant ones. Hence the coal owners damned the suppression of the £1 note in the sacred name of free trade, which they interpreted to mean "that Government ought not to interfere with the private dealings of individuals, except for the purposes of preventing fraud or facilitating the operations of Exchange." Just where the £1 note came in was left a mystery.

The spectacle of monopolists' pleading in the name of free trade may seem incongruous to some; but the incongruity quickly disappears when it is understood that to the nineteenth-century free trader, "free trade" meant just that. The identification of free trade with competition was a feat of economic apologetics.

During the summer of 1828 a serious situation developed between the Tyne and the Wear. The Wear systematically exceeded

<sup>12</sup> GTW, March 7, 1828. The keelmen lost their suit, but I have not discovered that the owners actually succeeded in turning it against them.

<sup>13</sup> GT, May 17, 1828.

its issue, the main culprit apparently being Lord Londonderry. The latter was not in a very conciliatory mood, and late in August he threatened to break up the whole regulation before the current agreement expired.<sup>14</sup> Things looked very black when the Tyne Committee, meeting on September 9, produced figures to show that up to the end of August the Wear vend had been 557½ chaldrons per thousand of the basis, whereas the Tyne vend had been only 483 per thousand. The regulation would doubtless have come to an abrupt end right then and there had not the Wear owners suddenly adopted a more conciliatory attitude. They agreed that the Tyne should be allowed much larger issues for the remainder of the year, and the tension lifted for the moment. The Wear excess of 74½ per thousand had been reduced to 27 by November<sup>15</sup> and to 22 by December, and it was agreed that it should be wiped out by the end of the year.<sup>16</sup>

But in reality the crisis was only beginning. The question of renewal for 1829 had still to be faced. A general meeting of both rivers was held on December 5 for the purpose of examining this question, with Londonderry in the chair. The desirability of renewal having been unanimously acclaimed in principle, the meeting got down to business. The crux of the matter was the lack of satisfactory machinery for settling disputes between the two districts, and the year 1828 had more than amply demonstrated the necessity for such machinery. A resolution was introduced looking to the formation of a general court of appeal for *both* rivers, and it was passed by all present.

This action was all to no avail, however. Lord Durham had been apprised of the intention to push through such a scheme, and although he stayed away himself, perhaps to avoid an open quarrel, he sent a letter which left no one in doubt as to his attitude. A general court of appeal, he wrote, was thoroughly objectionable. There were only seven owners on the Wear and they were all on the Committee. The only effect of such a measure would be to make the Wear completely dependent on the Tyne. Furthermore, he charged that five of the seven Wear owners had exceeded their

<sup>14</sup> CTW, Aug. 30, 1828.

<sup>15</sup> CTW, Nov. 4, 1828.

<sup>16</sup> CTW, Dec. 2, 1828.

allowed quantities in 1828. He would not even discuss a regulation for 1829 until he had received adequate assurances that there would be no repetition of this.

A second general meeting was called for December 19. Lord Durham was again absent, and his representatives did not know his views. At this time, Lord Londonderry moved that the regulation be abandoned. The consternation among the smaller owners was great, according to a press correspondent,<sup>17</sup> and they bent every effort towards avoiding such a result. The effect was a postponement into January with a few more weeks of grace in which to convince Lord Durham of the error of his ways.

Action could not be indefinitely delayed, however. The postponed meeting was held on January 19, 1829. It was declared that the court of appeal was essential to secure compliance with the regulation on the Wear, guarantees of which Lord Durham had demanded. If his Lordship did not signify his concurrence with such a court of appeal before January 24, the trade would be considered open from that date.

The United Committee met on January 24, and finding Lord Durham's reply unsatisfactory, declared the trade open.

### 3. THE COAL OWNERS AND THE RAILWAYS

Before proceeding to a consideration of the open trade of 1829, let us interrupt the story to consider briefly the attitude of the established coal owners of the Wear and Tyne towards the public railway, which in 1828 was still in its veriest infancy. Nevertheless the coal owners were already aware of the significance of the railway for their position, as is evidenced by a petition prepared by the United Committee at a meeting of April 5, 1828. This petition, denouncing public railways,<sup>18</sup> was the opening shot in a bitter campaign waged against the new form of transportation.

The opposition of the coal owners contained no sentimental objections to the railway as such; in fact they were only too glad to

<sup>17</sup> The *London Sun*, Jan. 24, 1829.

<sup>18</sup> The railway specifically involved is referred to in the petition as the "Stockton etc. Railway," which, in view of the numerous projects in the air at the time, is hardly sufficient to establish its identity.

use it themselves. It was not even based on a consistent objection to "the invasion of property rights" involved in the powers of eminent domain. The only consistent element in their attacks on public railways was the desire, never lost sight of, to protect their own privileged position in the coal industry of Great Britain. That this led them to make use at various times of obviously contradictory arguments never worried them in the least, if indeed they ever noticed the fact at all.

Thus when the London and Birmingham Bill first came up, the Tyne Committee immediately pledged the owners "to oppose the bill in both Houses of Parliament upon general principles,"<sup>19</sup> and called together a general meeting of all the owners of the Tyne and Wear to consider what action should be taken. At this meeting, which was held on February 25, 1832, a petition was approved in which it was stated that the object of the London and Birmingham Bill was "by an invasion of private property to force the carrying trade of the Kingdom from its natural course, and to give to the affluent inhabitants of a flourishing district another advantage beyond those they already possess over their less fortunate competitors."

This was an argument against railways that obtained their right of way in any way other than by private bargaining with land owners. And yet, in 1836, John Buddle was explaining to the Commons Committee that the coal owners by no means objected to all such railways; on the contrary it was only to coal roads that they objected.<sup>20</sup> Even the Stockton and Darlington was to be considered "under a very different principle to the railways lately brought before Parliament." It may appear that the main difference was that the Stockton and Darlington was all finished, whereas the others could still be blocked; but not to Buddle. The Stockton and Darlington was "for the general purposes of the commerce of the country." (What was the London and Birmingham for? Why, "to force the carrying trade of the Kingdom from its natural course"! ) Likewise the Newcastle and Carlisle, "that connects the two seas for the general commerce of the country."

<sup>19</sup> CT, Feb. 14, 1832.

<sup>20</sup> *Report . . . of the Coal Trade*, 1836, pp. 122 and following.

Perhaps it can be argued that it is hardly fair to compare the attitude taken with respect to the London and Birmingham with that adopted in the case of the numerous Durham lines. The two problems, though touching the coal owners in the same spot, must have appeared to them quite different. They must have come very quickly to realize that they stood no chance of keeping London isolated from the Midlands; besides, the possibility of carrying coal by rail to London on any significant scale was still very remote. As late as 1845, only 8,377 tons reached the metropolis by this route.<sup>21</sup> Capacity simply was not large enough to carry all the freight that wanted to move as well as a significant quantity of coal. This must have been known to the more thoughtful owners in the early thirties just as it was to Taylor fifteen years later.<sup>22</sup>

But the question of railroads exclusively designed to carry coal to the coast from inland Durham — that appeared to raise different issues. Such railways in many cases would pass over their own lands — “whether they shall consent or otherwise” — and the coal mines which they would open would come into direct competition with their own. And what was worst of all, so the coal owners contended, these interlopers would not have to pay wayleave rent, which they themselves had had to pay from time immemorial. “The consequences of these bills,” wailed a petition of 1836 to the House,<sup>23</sup> “will be to relieve the promoters thereof, and the coal proprietors of the district through which it is intended to pass, from the necessity of making private bargains for wayleaves with the landed proprietors, and the promoters are therefore attempting to obtain an unfair advantage for themselves and others over your petitioners and others.”

“We only wish equal justice,” cried John Buddle; “let us all be saddled with wayleaves, or all be exonerated from them.”<sup>24</sup> This

<sup>21</sup> Taylor, *Observations*, p. 46.

<sup>22</sup> “As regards the question . . . of conveying coals to London by Railways, . . . it will be recollected that those railroads are yet to be constructed: for it is admitted that the great lines now terminating in the metropolis, are quite inadequate, consistently with their general traffic, to convey more than a very limited quantity of coals” (*Observations*, p. 48).

<sup>23</sup> Bell Collection, vol. VIII, p. 469. The Bills referred to were for the following railway projects: (1) The South Durham Railway; (2) The Durham Southwest Junction Railway; and (3) The Newcastle and North Shields Railway.

<sup>24</sup> *Report . . . of the Coal Trade*, 1836, p. 122.



plea does not ring true, however. Many of the coal owners, and especially the large ones, were receivers of wayleave rent, probably to a far greater extent than they were payers. Looked at from the point of view of the whole Tyne-Wear district, wayleaves were just a way of dividing up the monopolistic gains of geographical location. What the district as a whole wanted was to protect this monopolistic position; to relieve every one of wayleaves would not promote this end one iota.

It must not be supposed that the owners limited their activity in opposition to railway projects to drawing up petitions. The case of the South Durham Railroad will illustrate their methods. A general meeting of both rivers, held on April 2, 1836, passed a resolution violently denouncing the project and set up a special committee to lead the fight against the bill. This committee, meeting on April 7, recommended a levy of 12s. 6d. per thousand of the basis plus a request to lessors of mines and wayleaves for 1 per cent of their rents to build up a campaign fund. Actually £1 per thousand was levied and the landlords agreed to do their share.<sup>25</sup> Just what was done with all this money is impossible to tell, though the type of activity may be guessed from the fact that the Coal Trade paid part of the expenses of the witnesses employed by the Dean and Chapter of Durham to oppose the South Durham bill.<sup>26</sup> Of course the trade sent its own witnesses too.

It is very interesting to note that the Duke of Northumberland sent in as his 1 per cent of rent contribution no less than £180 18s. 4d.<sup>27</sup> This means that his Grace received more than £18,000 annually from royalties and wayleave rents. Well might the landlords contribute generously to fighting the railroad, for it was they more than any other group that benefited from the favored position of the Tyne-Wear district.

It may be a cause for surprise that so influential a body of men as the northern coal owners did not have more success in their efforts to combat the railroad; for they certainly had very little, if any. But the explanation is essentially very simple. The industrial bourgeoisie was climbing into the saddle in England, and in the

<sup>25</sup> CTTW, Sept. 5, 1836.

<sup>26</sup> Financial report of Dec. 10, 1836.

<sup>27</sup> CTTW, March 4, 1837.

process it was pushing the feudal-minded landlord aristocracy into the background. The struggle was bitterly fought during the twenties and thirties, though the *coup de grace* did not come until the repeal of the corn laws a decade later. There was perhaps no more hotly contested nor truly symbolic issue in this struggle than that over the railroads. The railroads stood for progress and industrialization, and the landlord class fought them on that account. On this issue there could be and was no compromise; the exuberant bourgeoisie, flushed with repeated triumphs, pushed the railroad through against all opposition. The northern coal owners were, to be sure, a powerful and influential group; but it was entirely useless for them to set themselves against so strong a current. The outcome was decided before the issue was joined.

#### 4. OPEN TRADE IN 1829

Let us now return to the situation in 1829. The causes of the breakdown in the regulation in January of that year were two in number: dissatisfaction on the part of Lord Durham with proposed measures for arbitrating disputes between the two rivers, and dissension among the Wear owners over violations of the 1828 agreement. The Tyne owners were, so to speak, the innocent victims of these quarrels. Preserving their organization intact, they set about the tasks of minimizing the evils of non-regulation and finding a compromise which would bring their southern neighbors back into the fold.<sup>28</sup> Resolutions were passed against price cutting and against sending coals to London on freighted ships. It shortly became obvious that price cutting was inevitable,<sup>29</sup> and indeed it was soon being advocated in preference to freighting.<sup>30</sup>

The negotiations for renewing the regulation dragged on with out apparent effect until June, when finally a general meeting was

<sup>28</sup> GT, Feb. 3, 1829.

<sup>29</sup> As between the first market day of February, when the effects of non-regulation had not yet been felt in London, and the first market day in March, the London price of Stewarts' Wallsend fell by 5s. 3d. per London chaldron. (The sources of all price statistics, unless otherwise stated, are discussed in Appendix A.)

<sup>30</sup> GT, Feb. 10, 1829. The objection to freighting was that it took the market out of the north, where transactions could be watched and checked, and put it in the numerous ports of destination. No price agreement could have been maintained under a universal regime of freighting. The opposition to the practice by the Com-

arranged. At this meeting the referee plan, which has already been explained, made its first appearance; it was later to become the most important stabilizing feature of the cartel. Lord Durham's objections were fully met and he signified his readiness to participate in a new regulation. Most of the other owners also signed the articles which had been prepared, leaving only a few outside.

The Hetton Coal Company, a large concern on the Wear, refused to sign, however, as did the owners of Townley Main and Team on the Tyne.<sup>81</sup> The Hetton people finally came around early in August when the Tyne Committee agreed to certain minor modifications of the rules,<sup>82</sup> leaving only the other two. At first Mr. Atkinson, owner of Townley Main, insisted that he must be allowed to name his own basis, a demand which was, as the Tyne Committee pointed out, utterly inconsistent with the whole plan of regulation,<sup>83</sup> but he must have been brought around through persuasion or pressure, for on August 31 it was announced that all the signatures were in and the regulation was in force again for another twelvemonth. Work was to start at once on preparing the new bases; in the meantime those of 1828 were to be used.

There must have been very general relief along the banks of the Tyne and the Wear. The price of best coal in London, which had been 40s. per London chaldron in February, had fallen month by month until it hit 30s. 9d. in August.<sup>84</sup> With the renewal of regulation, the situation began to improve and by January 1, 1830 the price had climbed back up to 40s.

After the renewal of 1829, the affairs of the Limitation proceeded smoothly until the spring of 1831. Much of the time and energies

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mittees was at all times determined and vigorous. Open trade was always accompanied by a great deal of it, and trade connections formed in such times were difficult to break when regulation was reestablished. Hence the opposition even during open trade. The practice was never altogether eliminated, as the continual recurrence of the problem in the minute books testifies.

<sup>81</sup> CTW, June 27, 1829.

<sup>82</sup> CT, Aug. 8, 1829.

<sup>83</sup> CT, Aug. 10, 1829.

<sup>84</sup> There is indication in the minutes immediately after the renewal that freighting, excess measure, and bribes to ship captains had been all but universal during the open trade (CT, Aug. 31, 1829).

of the Committees were taken up with the anti-coal-tax campaign, which we have already had occasion to mention. The agreement entered into on August 31, 1829 was prolonged until the end of 1830, when it expired; and no difficulty was experienced in concluding a new one for 1831.

One incident of this period seems worth mentioning as an indication that the coal owners were well instructed in the ways of influencing the press. A resolution by the United Committee of April 10, 1830 was passed "that the sum of £21 be remitted to Mr. Veitch of the *Durham Chronicle* for printing an exposition of the real state of the Coal Trade in 1830."<sup>85</sup>

#### 5. THE STRIKE OF 1831

At binding time, early in April, 1831, the miners came out in what appears to have been an almost 100 per cent effective strike. The action had been carefully planned, mass meetings having been held on February 26, March 12, and March 27 to air the miners' grievances, which concerned wages, hours, and the terms of the annual bond. On April 4, the day before the bonds expired, "immense numbers" of pitmen met and framed their demands. When the latter were not acceded to, the strike began.<sup>86</sup>

The owners were taken off their guard; and the tie-up appears to have been nearly complete. The price of coal, which had been falling rapidly during the first four months of the year, turned up. Between the first market day in April and the first market day in May, Stewarts' Wallsend rose in London from 29s. to 35s. per London chaldron; while towards the end of the seven-weeks' strike, Galloway reports that coal was carried to Newcastle.<sup>87</sup>

The tactics of the owners were not very clever and were even less successful. At first they carried on negotiations through the regular Limitation machinery, apparently without effect. On

<sup>85</sup> The articles were collected in a pamphlet, *An Exposition of the Real State of the Coal Trade* (1830). Their purpose was to show that there was no monopoly, that the coal owners were scarcely making any money, and that the root of all evil was taxes and government interference. These arguments apparently served their purpose as well a hundred years ago as they do today!

<sup>86</sup> Galloway, *Annals*, I, 465.

<sup>87</sup> *Annals*, I, 466.

May 6 a general meeting of both rivers was called at which it was decided to adopt stronger methods. All those who had signed bonds were to be forced to go back to work or go to jail, while protection was to be guaranteed to all others who were willing to resume work.

The assembled owners were not so innocent as to believe that these ends could be accomplished without provoking the workers to violence, and they elaborated plans for dealing with the expected outbreaks. They resolved to establish a patrol of special constables at every colliery to watch the movements of the strikers. Should the latter leave their houses and show a disposition to assemble, a general alarm according to prearranged signals was to be given to prevent their meeting at certain strategic places. Furthermore a deputation was to wait on the local military commander to request him "to carry the stations of the military into a detailed arrangement and to take all measures the crisis demands."

The expected violence was indeed provoked,<sup>38</sup> but the strike was not broken as the owners had hoped it would be. Towards the end of May, the owners' resistance began to crumble; and from the absence of any record of negotiations in their minute books we may assume that they settled with the union individually. A few held out longer. As late as August, the trade as a whole voted to indemnify those whose men had not yet returned to work, in the hope of scoring at least a few minor victories.<sup>39</sup> On the whole, however, the union had scored a great triumph. An average increase in wages of about 30 per cent, alterations in the terms of the bond, and a substantial reduction of hours were among the concessions gained.<sup>40</sup>

The strike left a backlog of unfulfilled demand. During the summer months issues were large, and, as usual under such happy circumstances, the regulation worked frictionlessly. There was a complete absence of the usual complaints and violations from the Committees' records. Much time was given to considering and trying to influence the new coal-trade bill which was then being shaped

<sup>38</sup> Galloway, *Annals*, I, 466.

<sup>39</sup> GTW, Aug. 5, 1831.

<sup>40</sup> Galloway, *Annals*, I, 466.

in the House of Commons. The year 1831 ended with a net balance of shorts.

The agreement for 1832 was entered into without any special difficulty — or at least so it appeared from the minutes of the general meeting in December at which the new agreement was proposed. Only one discordant note was struck; Lord Londonderry wanted to be assured that his basis would be increased to correspond with his increased shipping facilities resulting from the completion of Seaham Harbour.<sup>41</sup> But not much was said about it at the time, and the regulation proceeded as if all were in order. As a matter of fact, however, Lord Londonderry never signed the articles for 1832.<sup>42</sup> The regulation was continued from month to month in the continuous expectation that a satisfactory arrangement could be made with him, but no solution was reached until the time for signing the agreement of 1833.<sup>43</sup> In the meantime the seeds of discord had been sown and were to bear fruit in one of the longest open trades the Limitation ever experienced. But we are getting ahead of our story. There was much more involved in the break-up of 1833 than Lord Londonderry's recalcitrance; there was the strike of 1832.

## 6. THE STRIKE OF 1832

The successful strike of 1831 had had two effects. In the first place it had greatly increased the militancy and confidence of the union. During the remaining months of 1831 and the first months of 1832 frequent meetings were held, violence was occasionally used against non-union miners, and output was considerably restricted. The union began to dream of a closed shop.<sup>44</sup> In the second place the owners had learned a lesson. Most of them had never before had to face a large strike; the last general walkout had taken place in 1810. But the defeat of 1831 put them on their

<sup>41</sup> Seaham was begun in 1829 as a purely private undertaking by Lord Londonderry, and the first shipment of coals left the harbor on July 25, 1831 (M. A. Richardson, *Local Historian's Table Book*, Historical Division, IV, 2, 39, 90).

<sup>42</sup> This fact appears in a report, dated 5th and 6th September 1833, of a special committee appointed Aug. 31, 1833 to examine outstanding differences.

<sup>43</sup> CTW, Jan. 18, 1833.

<sup>44</sup> Galloway, *Annals*, I, 467.

guard and made them long for an opportunity to even the score with their insubordinate workers.

They had not long to wait. On March 3, 1832, between seven and eight thousand pitmen assembled on Bolden Fell to discuss the new bonds. Demands for a closed shop and for removal of several objectionable clauses of the bond were formulated; and on the same day a strike began.<sup>45</sup>

The owners accepted the challenge with alacrity. A committee was appointed to look into the dispute. In their report, read at a general meeting of owners held on March 10, the Committee outlined the concessions which had been granted as a result of the previous year's strike. They estimated the loss of production attendant upon the reduction in hours and the restrictive policy of the union at 317,519 Newcastle chaldrons and finished by urging a strong anti-union stand on the owners. The issue was thus joined.

The owners began at once to employ strike-breakers; and on April 10 the Tyne Committee petitioned the Home Office for more troops to protect these "loyal workers." "Yellow-dog" contracts first made their appearance at a United Committee meeting on April 28. On May 5 a general meeting drew up a long and informative petition to the House of Lords, requesting an investigation of the two strikes.<sup>46</sup> That of 1832 had been less complete and more "energetically resisted" and hence more violent than that of 1831, their Lordships were informed.<sup>47</sup> Soon afterward it was decided that all future hiring would be done only under a "yellow-dog" contract.<sup>48</sup> The union must go once and for all.

On May 23, the Tyne Committee dispatched an emissary to Liverpool, Wales, and Cornwall to recruit scabs, and on May 29, a levy of £10,000 was authorized for bringing in "strangers" and for indemnifying "such collieries as may have suffered by the combination of those lately in their employment."<sup>49</sup>

<sup>45</sup> Richardson, *Table Book*, H. D., IV, 113.

<sup>46</sup> The general temper of the country, particularly the agitation for the Reform Bill, should be kept in mind as the background of this strike.

<sup>47</sup> See also a speech by Lord Wharnccliffe in the Lords, reported in the *Times*, June 29, and pasted in the minute books.

<sup>48</sup> CTW, May 12, 1832. "Benefit societies," bearing a surprisingly close resemblance to the modern "company union," were also launched.

<sup>49</sup> GTW, May 29, 1832.

During the summer months the campaign reached its greatest intensity. Meetings of one sort or another were held almost daily. During June there were frequent notices of the arrival and assignment to various collieries of the "strangers," now streaming in from all over the country. Some of these "strangers," being union men, packed up and went home just as soon as they discovered what they were wanted for. They had been told that the scarcity of labor in the north was due to a large number of deaths from cholera.<sup>50</sup>

It is impossible to tell how many strike-breakers were brought in, but the number was certainly very large. For example, on July 7 the United Committee voted £392 to Fawdon Colliery for bringing 196 persons from the lead mines and £120 to Ouston for bringing 60 from the neighborhood of London; and on August 11 no less than £6000 was granted to the Hetton Coal Company for a similar purpose. These are only examples. All in all several thousand unfortunate workers must have been brought to the district.

On August 29, the Tyne Committee called a halt to this kind of recruiting, "as it appears certain that more strangers are inclined to offer their services than the trade can possibly employ." And when the strike began to collapse and the local miners were returning to work, the discharge of the imported laborers was roundly condemned by the United Committee. "The representatives' particular attention to this can alone prevent the coal owners from being justly taxed with a breach of faith towards those they have lately induced to enter into their service."<sup>51</sup> A similar resolution, only in stronger terms, passed on December 14, suggests the fate of the unfortunate "strangers."

In the meantime, violence was plentifully employed on both sides of the dispute, with the advantage obviously on the side of the employers and their obedient agents, the police and the military. The workers were systematically ejected from their homes, and they bitterly resented the importation of labor from other districts to take their jobs away from them. Riots and even murders followed by stern suppression were the inevitable outcome.

<sup>50</sup> Report of one of the recruiting agents, read to the Tyne Committee, June 19, 1832. No voice was raised in protest against these tactics.

<sup>51</sup> CTW, Sept. 22, 1832.



At the Durham Summer Assizes some fifty union pitmen were brought to trial, charged with nearly every crime on the calendar. Four death sentences along with a great many for long prison terms were passed. The extent to which the cards were stacked against the miners is indicated by the fact that the judge, in charging the jury, as well as in passing sentence, blamed everything on combinations among workmen.<sup>52</sup> Finally, in September, the resistance of the impoverished and starving miners collapsed, and the strike was broken. With it went the union, not to return for nearly a full decade.

The triumph of the coal owners was much less complete, however, than it appeared on the surface. The workers were thoroughly beaten, to be sure, but the strike left a rich legacy of discord which only a sound whipping from the forces of competition could teach the owners to liquidate.

#### 7. OPEN TRADE, 1833-1834

The effect of the strike of 1832 was to disrupt the normal functioning of the regulation. Its incidence had been very uneven, hitting the Tyne much harder than the Wear and crippling some collieries while others were able to work quite as usual. Thus the year 1832 ended with the Wear 117 per thousand over its issue while the Tyne was 38½ per thousand under,<sup>53</sup> a very large discrepancy which foreshadowed trouble. Furthermore, those collieries that had been able to work were to indemnify those that the strike had closed, for which purpose a levy of £2 per cent upon the vend for July, August, and September was authorized.<sup>54</sup>

This would have been all right if there had been general agreement on the amount of claims to be allowed, and if every one had consented to bear his share of the expenses, but neither of these conditions was satisfied. In particular, Lord Londonderry refused

<sup>52</sup> See *Report of the Trials of the Pitmen and Others, Concerned in the Late Riots, Murders etc., in the Hetton and Other Collieries, at the Durham Summer Assizes* (1832). Other material bearing on the conduct of the strike is listed in the bibliography. Perhaps the most vivid account is that given by an eyewitness, John Holland, in *The History and Description of Fossil Fuel, the Collieries, and Coal Trade of Great Britain* (1835), pp. 301-304.

<sup>53</sup> CTW, Jan. 12, 1833.

<sup>54</sup> GTW, Nov. 7, 1832.

to bear any share of the strike expenses. It will be remembered that Londonderry had never signed the agreement for the year 1832; and it appears that he escaped the strike relatively unscathed. His action in refusing to chip in on the strike fund, therefore, was adding insult to injury. He had been profiting at the expense of his neighbors all year through being subject to no restriction of quantity, and on top of this he refused to help them out of a difficulty from which he had luckily escaped. Naturally the resentment at such behavior was great.<sup>55</sup>

The United Committee had been instructed by a general meeting of November 7 "to report to the trade as soon as possible as to the practicability of effecting a regulation for the year 1833," and was engaged in exploring the possibilities, without, it may be assumed, making much progress. In any case, late in January it received a communication from the Hetton Coal Company which at once put a stop to all negotiations. The Hetton Coal Company, the announcement read, "declines for the present to accede to the regulations proposed."

No reason for this decision was recorded at the time by the Committee, but the proceedings of a meeting of the Hetton owners held on August 12, 1833 and copied into the general minute book shortly afterward leaves no doubt that the strikes of the preceding years were at the root of the trouble. The owners complained that the claims of the company on account of the two strikes, and for "short workings" in 1831 and 1832, and "in respect of the owners of other collieries having worked more than their respective quantities previously to and in the months of November and December 1832," had not been settled. Furthermore if we take into consideration the natural feeling of the Hetton owners with regard to Londonderry's conduct, it is not difficult to understand their reluctance to renewing the regulation until some drastic readjustments could be effected.

The miners, however, could take scant comfort from this quarrel between their employers even if they might legitimately regard it as of their own doing, for the ironical reason that it was in the relations with their workers, and only there, that the owners' combina-

<sup>55</sup> Report of special committee, 5th and 6th September, 1833.

tion did not dissolve. When binding time came around the owners of both rivers sat down together as though nothing had happened. There had been some talk of eliminating the bonds altogether, but on second thought it was decided to eliminate only those parts which were favorable to the workers, which could be safely done now that the union had been destroyed. Accordingly, it was voted to do away with the guaranteed weekly wage, the one feature which could really justify the binding system from the point of view of the miners,<sup>56</sup> and three weeks later a scale of wages considerably reduced from that of the previous year was recommended to all collieries.<sup>57</sup> •

The owners had learned a lot about labor relations in the past two years and they intended to make use of their knowledge. When Jarrow and Felling collieries took it upon themselves to cut wages below the general level which had been agreed upon, a special meeting was called together to pass upon the action. Those present were unanimous in condemning Jarrow and Felling, as such conduct "would tend very justly to create an unfavorable opinion in the minds of the public."<sup>58</sup> It is clear from the arguments advanced that they regarded this as a matter of considerable importance.

In the meantime, things had been going from bad to worse in the London market. The price of Stewarts' Wallsend, which had been 21s. 9d. per ton on the first market day of December, had gradually dropped to 15s. 6d. in July and August. This was the lowest point ever reached in the whole Limitation period. As the pressure grew, so did the efforts to find a common basis for renewing the regulation.

A general meeting of both rivers held on July 13 resolved in part "that the prosperity of the coal trade, and consequently of this district, can only be permanently secured by some equitable arrangement amongst the parties concerned, whereby the supply should be apportioned to the demand at a fair and remunerating price"; and it proceeded to formulate a set of rules which became the basis

<sup>56</sup> GTW, Feb. 23, 1833.

<sup>57</sup> GTW, March 15, 1833.

<sup>58</sup> GTW, April 13, 1833.

for subsequent regulations.<sup>59</sup> But the outstanding grievances, particularly of the Hetton Coal Company, had not been satisfactorily dealt with, with the result that nothing came of the effort. The special committee appointed August 31, the report of which has already been cited, gave it as its opinion that there was very little prospect of renewal until Lord Londonderry should consent to pay his share of the strike expenses.

Along in August, sentiment shifted to trying a price regulation without the usual control over quantities, though doubts were freely expressed as to whether it could be made to work. The state of affairs then obtaining was well summed up at a general meeting of both rivers held on August 24. The resolutions adopted declared in part:

That all differences arising from the claims between the two rivers, and of various collieries, for compensation for shorts in 1831 and 1832, be referred to three gentlemen, to inquire into all facts bearing upon those claims, and decide upon what, in their judgement, will be a just and reasonable adjustment of such differences.<sup>60</sup>

That it is the opinion of this meeting that the regulation as to price only, ought to be tried in such a way as not to affect, at any future period, the formation of one more comprehensive, embracing both price and quantity, should it be found advisable so to extend it.

That for the present 24s. 6d. per ch., of 53 cwt., be fixed as the price for the best coals.

This measure appears to have met with limited success. The price of Stewarts' Wallsend rose from 15s. 6d. in August to 17s. 3d. in September; and while the remaining increases in price to the end of the year were probably mostly due to seasonal influences, there was, nevertheless, a noticeable improvement in the situation. Still, it was a long way from satisfactory, and the remainder of the year saw several fresh attempts to establish the regulation on the old price-quantity basis, as well as efforts to strengthen the simpler price control.<sup>61</sup>

<sup>59</sup> GTW, July 13, 1833. A copy of the resolutions and proposed rules adopted by this meeting was put in evidence before the Committee of 1836 by Brandling (*Report . . . of the Coal Trade*, 1836, pp. 6-7).

<sup>60</sup> It was this suggestion which gave rise to the special committee referred to above.

<sup>61</sup> GTW, Sept. 21, 1833; GTW, Sept. 28, 1833; CT, Nov. 5, 1833; CT, Dec. 10, 1833; GT, Dec. 28, 1833.

## 8. RENEWAL OF REGULATION, 1834

A new note was injected into the negotiations of 1833, namely, the insistence on the necessity for including the Tees in any subsequent agreement. The rapid growth of the Tees as a coal-exporting district explains the change in attitude on the part of its northern neighbors. Table 6 shows the shipments from the Tees to London from 1828 through 1834.<sup>62</sup>

TABLE 6  
SHIPMENTS FROM THE TEES TO LONDON, 1828-1834

	1828	1829	1830	1831	1832	1833	1834
Tons:	19,448	3,902	24,314	62,749	172,930	170,690	221,971

In 1830 Brandling told the Commons Committee that they of the Tyne and Wear regarded the Tees as a rival trade, "the same as Wales, or any of the exporting ports in Yorkshire,"<sup>63</sup> and in 1830 the various places mentioned were all sending trifling amounts of coal to London. The Committee wisely looked forward to increased competition from these other sources and concluded that as long as these districts "are not included in the Regulation (which we trust will not happen), the effect upon the market, of the supply they are capable of affording, cannot fail to be felt."<sup>64</sup>

It was felt and the result was that the Limitation ceased to regard the Tees as "the same as Wales or . . . Yorkshire." Sorrowfully the Committee of 1836 had "to call the attention of The House to the fact, that, the event which that Committee [i.e., that of 1830] deprecated, has since then actually taken place; and the Union of the Tees is now in full operation for limiting the supply of Coals."<sup>65</sup>

The amount of Stockton coal reaching the London market first attained really significant dimensions in 1832; and, accordingly, it is towards the close of that year that we hear of the desirability of

<sup>62</sup> Figures put in evidence by Pearsall before the Committee of 1836 (*Report . . . of the Coal Trade*, 1836, p. 137). Note the declines in 1829 and 1833, years of open trade on the Tyne and Wear, and hence of low prices in London.

<sup>63</sup> *Report . . . of the Coal Trade*, 1830, p. 251.

<sup>64</sup> *Report . . . of the Coal Trade*, 1830, p. 17.

<sup>65</sup> *Report . . . of the Coal Trade*, 1836, p. xii.

including the Tees district in the Limitation. A general meeting of November 7, 1832, expressed the "decided opinion" that a regulation for the ensuing year "cannot be either beneficial or permanent unless it is general, embracing all the collieries that ship their coals from the ports of Newcastle, Sunderland, Seaham, Stockton, Hartley and Blyth." This view was reaffirmed at the general meeting of July 13, 1833; and several Tees owners attended a meeting of September 28. From this time on it was taken for granted that when a new regulation could be engineered it would include the Tees on the same basis as the old ones had included the Tyne and Wear.

By February, it is clear that the long open trade had disposed every one concerned to return to regulation as quickly as possible. For over a year the price of coal in the London market had been consistently below any level it had ever reached before. The average for the year was 18s. 4d. per ton for best coal as compared to 22s. 4d. in 1932. So far from there having been any compensating increase in sales, there was, according to the official figures, an actual decline in shipments to the London market of more than 100,000 tons.<sup>68</sup>

It is scarcely remarkable that under these circumstances there was not much of a tendency to stress the quarrels of two years back. The universal demand was for relief from the intolerable cutthroat competition which was eating into the resources of even the most affluent coal owners. Gosforth Colliery, one of the largest on the Tyne, had gone so far as to suspend operations; and it was freely predicted, though probably without much foundation, that many others would soon be forced to follow suit.

During February things moved rapidly to a conclusion. Following a suggestion from the Wear owners (February 3) that the bases of 1832 be used for the rest of 1834, the Tyne gentlemen convened on February 15, and adopted a set of rules based on the resolutions of the previous July 13. Similar regulations were adopted by the Tees on February 21 and by the Wear on February 27. The new regulation went into effect on March 1, 1834.

It appears from the minutes of the Tees meeting that there were

<sup>68</sup> An attempt to analyze these figures more carefully is made in Appendix A.

at that time about twelve collieries in that district. While the Tyne and the Wear were able to use the bases of 1832 pending a new deal, no such course was open to the Tees. They got around the difficulty by agreeing to use the *vends* of 1832 as bases until such time as a reasonable settlement, both as between districts and as between individual collieries, could be arranged.

On March 1, the day the new regulation went into effect, a price list, covering all the different types of coal, was issued. This may be summarized briefly as follows (all prices are per *Newcastle chaldron* as charged to the ship captains):

1. *Tyne*. Top price of 25s. ranging down to 14s. for cheapest grade, for London sale. For coast sale, from 1s. to 2s. cheaper for most grades.
2. *Wear*. Top price 26s. 6d. for best Wallsend ranging to 19s. 6d. cheapest. Uniform for London and coast.
3. *Tees*. Top price 24s. ranging down to 19s., with a differential of 1s. between London and coast the general rule.

The dominant position of Sunderland coal is well illustrated by this comparison of the prices the owners were able to get at the port of shipment.

The immediate effect of the renewal was, as always, to raise the price in the London market. From 17s. 6d. per ton on the first market day in March, Stewarts' Wallsend jumped to 20s. 3d. in April. It slumped back again for a few months, though never falling below 19s. But gradually, towards the end of the summer, as the bad habits acquired during the open trade<sup>67</sup> began to wear off and as the factors' regulations, which we have already discussed in detail, commenced to operate, the price climbed up until by September it reached 21s. 3d.

During September, price adjustments as between different kinds of coal were decided upon within the framework of a general price advance at the ports of shipment. "To attempt an equalization by a reduction of price, with the present limited vend would be highly inexpedient if not impossible as many coals would then be placed

<sup>67</sup> Note the resolutions passed at a United Committee meeting, March 31, 1834, against freighting, upholding (a substitute for freighting), gratuities and allowances to ship captains, rebates, and overmeasure.

below the cost of production.”<sup>68</sup> These price advances were to go into effect on October 1, and “such prices shall be maintained till it shall appear that the trade shall have suffered, when the subject shall be opened for reconsideration.”<sup>69</sup> The effect was quickly felt, the London price of Stewarts’ Wallsend shooting up to 24s. on the first market day in November. Less than a year of regulation had restored the price structure which had been so thoroughly demoralized by the “fighting trade” of 1833.

<sup>68</sup> CTTW, Sept. 4, 1834.

<sup>69</sup> CTTW, Sept. 17, 1834.



## CHAPTER X

### YEARS OF EXPANSION AND DISINTEGRATION

#### I. EXPANSION

Practically all the major problems of the last phase of the Limitation's existence turned around one great central fact, namely, the continuous and unexampled expansion in productive capacity. For the time being we shall treat this merely as a fact without attempting to discover the reasons for it. Two tables have been prepared which seek to portray this state of affairs as accurately as possible. Table 7 gives the available data on changes in (1) the number of collieries; (2) productive capacity; (3) actual sales of coal (other than land sales), (4) the aggregate bases of regulated collieries, and (5) numbers employed. Table 8 is derived from Table 7. What about the reliability and significance of these data?

With regard to the number of collieries, the accuracy of these figures is certainly open to doubt, particularly in so far as they apply to particular districts. No clear agreement existed among the various witnesses who testified before parliamentary committees on the subject. For example, Cochrane, a Wear owner, told the Committee of 1829 that there were only nine collieries on the Wear at that time;<sup>1</sup> while Dunn gives nine as the number for 1836.<sup>2</sup> Both of these estimates appear to be the result of counting not the number of collieries but the number of owners. On the other hand, Morton's figure for 1836 is no greater than Buddle's for 1829, a fact which is *prima facie* suspicious. It may well be, however, that new investment on the Wear was at this time taking the form of increasing the size and capacity of existing collieries, new collieries only being opened up after the railroads had extended the size of the Wear district. This would

<sup>1</sup> *Report . . . of the Coal Trade, 1829, p. 17.*

<sup>2</sup> *Dunn, View of the Coal Trade, p. 203.*

account for the stability of the figure from 1829 to 1836 and its increase thereafter.<sup>8</sup>

Even admitting that the figures are reasonably accurate, it is of course by no means clear what significance we should attach

TABLE 7  
EXPANSION OF CAPACITY AND SALES, 1829-1843

	1829	1836	1843
Estimated Number of Collieries			
Tyne .....	41 <sup>a</sup>	45 <sup>b</sup>	70 <sup>c</sup>
Wear .....	18 <sup>a</sup>	18 <sup>d</sup>	28 <sup>c</sup>
Tees .....	6 <sup>e</sup>	20 <sup>f</sup>	22 <sup>c</sup>
Hartley & Blyth <sup>g</sup> .....	4	4	6
Total .....	69	87	126
Productive Capacity (in tons)			
Tyne and Wear only <sup>h</sup> ....	5,900,000	8,100,000	
Durham and Northumberland <sup>i</sup> ....		5,444,000 <sup>j</sup>	10,300,000 <sup>k</sup>
Vend Coastwise, London, and Overseas (in tons) <sup>l</sup> .....	3,700,000	4,800,000	6,100,000
Aggregate Basis of Regulated Collieries <sup>m</sup> .....	3,600,000 <sup>n</sup>	5,100,000 <sup>o</sup>	8,500,000
Number of Men Employed ...	21,000 <sup>p</sup>		34,000 <sup>q</sup>

<sup>a</sup> Testimony of Buddle, *Report . . . of the Coal Trade*, 1829, p. 28.

<sup>b</sup> Testimony of Buddle, *Report . . . of the Coal Trade*, 1836, p. 118.

<sup>c</sup> List in Coal Trade Minute Book, dated April 13, 1843.

<sup>d</sup> Testimony of Henry Morton, *Report*, 1836, pp. 77-78.

<sup>e</sup> Estimate based on quantity of coal shipped by the Stockton and Darlington in 1829.

<sup>f</sup> Testimony of Thomas Storey, *Report*, 1836, p. 104.

<sup>g</sup> Dunn, *View of the Coal Trade*, p. 203.

<sup>h</sup> Buddle's estimate, *Report*, 1836, p. 118.

<sup>i</sup> Taylor's estimate, *Observations*, p. 21.

<sup>j</sup> Figure for 1835.

<sup>k</sup> Figure for 1845.

<sup>l</sup> Porter, *Progress of the Nation*, Section II, chap. vi.

<sup>m</sup> Taylor, *Observations*, p. 22.

<sup>n</sup> Figure for 1828.

<sup>o</sup> Arithmetic mean of the aggregate bases for 1834 and 1838.

<sup>p</sup> Buddle's testimony, *Report*, 1829, p. 54.

<sup>q</sup> Figure for 1844; *Report . . . on Gases and Explosions* (1847), p. 42.

<sup>8</sup> Color is lent to this interpretation by Buddle's evidence in 1829. He stated that in the last ten years (1819-1829) the Wear had witnessed an increase in productive capacity largely in the opening up of "collieries of larger power." He thought that the number of collieries had also increased, but of this he was not sure. (*Report . . . of the Coal Trade*, 1829, p. 54.)

to them. As already indicated, the size and capacity of collieries varied. A colliery might include few or many pits, and so forth. Still, when we have recognized all possible sources of error, it must be granted that a strong presumption remains that the new investment in coal mining increased greatly in 1836-1843 over 1829-1836.

With regard to productive capacity, it is clear that Buddle's and Taylor's estimates were made on different principles. All that can be claimed for them is that they represent the views of

TABLE 8  
PERCENTAGE INCREASES IN THE ITEMS OF TABLE 7

	1829-1836	1836-1843
Total Number of Collieries .....	26%	48%
Estimated Capacity .....	37%	91% <sup>a</sup>
Vend .....	30%	27%
Aggregate Basis .....	42%	67%

<sup>a</sup> Increase 1835-1845.

careful and experienced observers as to the relative increase in productive capacity in the periods to which they respectively relate. From this point of view, the evidence they afford must undoubtedly be given considerable weight. Buddle's estimates refer only to the Tyne and the Wear and hence certainly underestimate the relative increase in capacity for the vend area as a whole, since there can be no doubt that the Tees was expanding more rapidly than the Tyne and the Wear at this time. Taylor's figures compare 1845 with 1835, whereas most of the statistics compare 1843 with 1836. No accurate correction can be made for this discrepancy, but it seems reasonable to reduce Taylor's estimated increase by about one third and to conclude that the expansion between 1836 and 1843 was between 60 and 70 per cent.

Taylor's figures on the aggregate basis were doubtless obtained from the records in the Coal Trade Office, to all of which he had access. He notes that after 1828 additional productive capacity was provided for by adding to the total basis.<sup>4</sup> Here, then, it would

<sup>4</sup> *Observations*, p. 22. Before that date the sum of the bases was kept nearly equal with the vend, whatever that might be.

seem, is a fairly reliable index of increases in capacity. Its close agreement with the direct estimates of increase in capacity is striking. The latter, corrected in accordance with what was said above, show changes of 37 per cent between 1829 and 1836, and of 60 to 70 per cent between 1836 and 1843; while the aggregate bases indicate changes between 1829 and 1836 of 42 per cent, and between 1836 and 1843, of 67 per cent.

Meanwhile, the statistics of the vend show a nearly steady rate of relative increase of about 30 per cent.

With regard to the number of men employed, it is by no means certain that the two estimates include the same categories of workers or are based on equally complete information. Nevertheless, taking them as they stand, and deducting 1000 from the 1844 figure to arrive at an estimate for 1843, we obtain an increase of 12,000 or 57 per cent between 1829 and 1843. This compares with a 65 per cent increase in vend for the same period, which, allowing for improved technique and the opening of rich new mines, is not at all unreasonable.

The conclusion to be drawn from the evidence submitted seems to be the obvious one that productive capacity was running ahead

TABLE 9

## INCREASE IN PRODUCTIVE CAPACITY COMPARED WITH INCREASE IN VEND

	1829-1836	1836-1843
Approximate Increase in Productive Capacity . . . .	40%	60%
Approximate Increase in Vend . . . . .	30%	30%

of sales and to a greater degree after 1836 than before. A conservative summary of this development is given in Table 9.

Assuming merely that there was no shortage in capacity relative to output in 1829, though in reality there was probably already a considerable excess,<sup>5</sup> this obviously means that after the latter date there was a progressive piling up of *excess capacity*. This tells the essential story of the breakdown of the system of

<sup>5</sup> Buddle estimated in 1829 that the Tyne collieries were capable of producing as much again and the Wear half as much again as their respective current outputs (*Report . . . of the Coal Trade*, 1829, p. 30).

regulation. Excess capacity was, so to speak, the poison that finally killed the "monster."<sup>6</sup>

We have yet to examine more carefully the source of the poison and to observe how it gnawed at the monster's entrails. In the meantime, the reader is asked to keep in mind the figures given in Table 9, as being the essential background to what follows.

## 2. THE CAUSES OF EXCESS CAPACITY

The evidence presented in the previous section raises three questions which must be answered. (1) What were the causes of excess capacity? (2) Why did they appear when they did? (3) In what way did excess capacity lead to the breakdown of the Limitation? There is only one sense in which these questions can be answered: we can construct hypotheses which, if logically consistent and adequate to explain the observed phenomena, may be regarded as the "correct" answers.<sup>7</sup>

Our method of procedure is to attempt to construct a theoretical model conforming as closely as possible to the known characteristics of the Limitation and to endow it with such further elements as may be necessary to arrive at the observed conclusions. If this can be successfully accomplished, we may legitimately complete our picture of the Limitation by ascribing to it these further elements, provided that they do not contradict anything we already know. Strictly speaking this should put us in a position to undertake research into the nature of the "further elements," but since in fact they mostly relate to such things as costs, profits, etc., on which information of the kind needed is simply not to be found, we shall have to forgo this last stage.

Assume, now, a group of entrepreneurs forming *ab ovo* an association for the production of a commodity, the demand for which is highly elastic down to a certain crucial price and thereafter highly inelastic. Such a demand curve together with its associated marginal revenue curve is shown in Figure 1. It is very like what

<sup>6</sup> See above, p. 39, on the alleged death of the "monster" in 1829.

<sup>7</sup> If there were more than one set of hypotheses which fulfilled the required conditions, there would be more than one set of "correct" answers, so long as there exists no way of checking on the hypotheses themselves.

we were led to believe was the demand curve for Durham and Northumberland coal in the London market. The associated entrepreneurs agree to sell at the price  $MP$  the quantity  $OM$  divided up among their number.

On what principle will they divide  $OM$ ? Starting from scratch, this will obviously depend upon cost conditions. If  $OM$ , for example, can be produced at minimum average cost by one plant, they will do well to pool their capital and all become directors of a single enterprise. If, however, the optimum scale of production

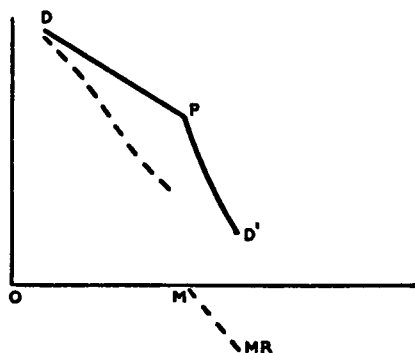


FIGURE I

is small relative to  $OM$ , each one can have his own plant. The aim in planning the plants should be to construct each one to produce the assigned quota at minimum average costs, and to choose the quota so that the minimum is a *minimum minimorum*. Let us assume that this is possible with each entrepreneur having his own plant.

Next we must examine the case of one entrepreneur who has constructed his plant to produce his quota,  $Om$ , and has agreed to sell at the fixed price  $P$ . His position is summarized in Figure 2. Here  $AC$  represents his average cost,  $MC$  the associated marginal cost. When he produces his quota  $Om$ , his net profit is shown by the rectangle  $ADEP$ .

This position is evidently unstable in the sense that it does not represent the point of *maximum* net profits. For the entre-

preneur in question will always imagine that if he could lower his price secretly — i.e., without the others' doing the same — he would be able to move along a highly elastic demand curve, say  $D_i$ , with its associated marginal revenue curve  $MR_i$ . If this were possible, the output  $Om'$ , yielding the maximum net profit  $BCFG$ , would be preferred. That is to say there will be a constant temptation to exceed quotas and cut prices so long as it can be done secretly.

Let us suppose now that any entrepreneur can increase his quota

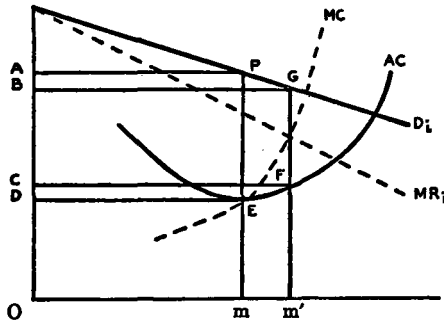


FIGURE II

by increasing the size of his plant. This will introduce a second element of instability, for a moment's reflection will show that so long as the average cost curve is not greatly raised by increasing the size of plant, it will be possible to choose a scale larger than the original one which will yield greater net profits. The individuals will be deterred from entering on such a course by the knowledge that if all increase the size of their plants no one will gain; the only result will be the same quotas for every one with higher average costs and lower profits all around. Still, it is important to notice that any steps in this direction are irrevocable so long as the principle of fixing quotas according to plant capacity is adhered to; for a reduction in plant accompanied by a reduction in quota would bring no advantage. Thus there is a constant temptation to enlarge plants in the hope of acquiring larger quotas

at the expense of other producers, but no temptation to reduce plants. Only by common action could plants be reduced.

So far we have proceeded under the implicit assumption that no new producers could enter the association, an assumption which we must now drop. The consequences are easily indicated. So long as a return to capital greater than in other lines of production can be earned, there exists an incentive to enter the association. New producers will have to be furnished with quotas at the expense of those already in the field. Evidently a situation

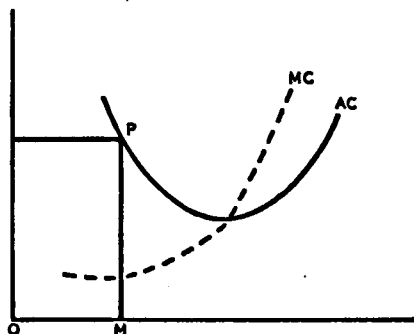


FIGURE III

will arise in which every one is producing at less than optimum capacity. Nor is there any escape through reducing the size of plants, for under our assumptions this would simply mean a corresponding reduction of quotas. The "equilibrium" position for any one producer is depicted in Figure 3, where the notation is the same as in the preceding diagram. No net profits are being enjoyed; and the pressure to shade prices and exceed quotas is *pro tanto* increased.

Before we proceed any further, a word may be said about the drawing of the average cost curves we have spoken of. One need not be much concerned about the amount of profit to be included; a rough allowance for the profit which could be earned in other trades, though hardly a satisfactory theoretical solution, is sufficiently accurate for our purposes, and no important error could result from drawing the curve in this way. Much more difficult is the question of rent. It might be argued that any abnormal



profits would soon be attributed to the sites on which the various plants were situated, i.e., that they would be absorbed by rent and would appear to the entrepreneurs as costs.

Of course this would not be the case if more sites of equal advantage were readily available; in this case, however, the relaxation of restrictions on entry to the association would quickly be followed by an influx of new producers, and the situation depicted in Figure 3 would soon develop. This, be it noted, is an "equilibrium" which is of advantage to no one, and it could hardly last for any length of time. If we are to explain an association of long duration without restrictions on entry, we must fall back on the assumption that new sites of equal advantage with those originally occupied are not available. In this case dropping the assumption of restricted entry leads to the conclusion that new producers with progressively higher costs will come into the association until such time as no further profitable production can be undertaken. In this case, the last or marginal entrant will be in the position of Figure 3, but those more favorably situated will still be making a clear profit from the association.

Here the question arises: would not this profit soon accrue to the landowner in the form of rent or royalty as the case might be? Would it not be necessary to redraw all the average cost curves to show that no one would be making any profit from the association except the landlords? And, if this is so, why would this be a more stable situation than the other where no advantages accrued to the entrepreneurs forming the association?

The answer relevant to the case we are studying seems to be twofold. First, to a considerable degree the landowners were themselves the entrepreneurs. To the extent that this was true there was an obvious advantage in maintaining the association. Second, while there doubtless was a tendency for rents and royalties to eat into excess profits, it appears that custom and convention played a very great role in determining the amount of mine royalties. As Nef remarks, "no method of assessing royalties to absorb everything above 'the usual profits of stock' . . . has yet been devised."<sup>8</sup>

Thus, given a limited number of favorable sites, there seems to

<sup>8</sup>I, 329.

be no reason why an association favorable to both landlords and entrepreneurs should not be durable. Its stability, however, is much more doubtful, inasmuch as it is constantly threatened by (1) secret price cutting and (2) attempts to enlarge quotas at the expense of others. We might expect periodic quarrels and breakdowns, followed by renewed regulation when the effects of general price cutting had been felt.

So far we have argued on the supposition that the demand curve remained static. If, however, we allow the demand curve to shift rightwards, the crucial price  $P$  remaining the same,\* we see at once that an opportunity for quota enlargement by those already in favorable positions — assuming that an increase in plant does not raise average costs by much — is continually being offered. On the other hand, since  $P$  has not increased, there is very little incentive to new, higher-cost producers to enter the association.

Let us now summarize some of the outstanding features of our theoretical model in its completed form, i.e., assuming variations in sites, no restriction of entry, and a rightward shifting demand curve ( $P$  remaining unchanged). It displays instability, but a persistent tendency to continue in existence; substantial gains to both entrepreneurs and landlords; growing individual plants with a *tendency* towards more growth than is warranted by the increase in demand (obviously what *actually* happens depends upon the relative rates of change of the two magnitudes); no particular influx of new producers even with expanding demand (such an influx, other things being equal, would take place only if  $P$  increased).

This model "fits" the Limitation excellently in the period prior to 1829. The instability manifested itself in occasional open trades. While no really good evidence exists, there seems to be no doubt that many coal owners and property owners, particularly of the largest and best mines, enjoyed excellent profits. That increasing demand<sup>9</sup> was met mostly by enlarging establishments already in existence is indicated by figures which we have already cited.

\* The "crucial" price, if deflated by a general price index, appears to have changed little. See the price series in Appendix A, Charts IV and VII.

The number of collieries in the Tyne and Wear areas about 1800 was no less than 50,<sup>10</sup> while it was only 59 in 1829.<sup>11</sup> In the same period, however, shipments from the Tyne and Wear increased from 2,100,000 tons to 3,700,000 tons.<sup>12</sup>

It is not difficult to show what would lead to conditions favorable to the breakdown of the association in the case of our model. We have only to examine what would happen if a large number of new sites equal to the original ones were suddenly opened up. It is evident that the limitation on new entrants, namely the high cost of new plants, would be done away with, that there would be a rush of new producers, and that the situation depicted in Figure 3 would be approached by all concerned. The advantages to landlords and entrepreneurs from the association would tend to vanish, and presently the only force keeping it in existence would be the fear of cutthroat competition. As more and more producers are pushed into actual losses, they tend naturally to become desperate. Once the association has broken up, a wholesale writing down of capital values takes place; and there is no longer any possibility of founding a new association.

In the case of the Limitation, it was the railroad that opened up the new sites. From 1829 to 1836 new collieries streamed into the association at a faster rate than sales increased, and the process was much accelerated after 1836. The effect on the old collieries which had to give up part of their quotas to the newcomers is

TABLE 10  
ISSUES, 1828-1844

	1828	1835	1838	1840	1842	1844
Issues: . . . . .	812	768	695	555	500	413

strikingly illustrated in Table 10, which shows the annual "issues" per 1000 chaldrons of basis.<sup>13</sup>

Concretely, this means that a colliery with a basis of 10,000 chaldrons in 1828 would have had a quota of 8,120 chaldrons to

<sup>10</sup> Above, p. 57.

<sup>11</sup> Above, p. 110.

<sup>12</sup> Chart V, Appendix A. The earlier figure is an average of 1799, 1800, and 1801.

<sup>13</sup> Taylor, *Observations*, p. 22.

sell. With the same basis in 1844, which it would have had if its size remained the same, its quota would have been only 4,130 chaldrons. As Taylor said, "the old collieries have in fact been obliged to surrender about 50 per cent of their quantity in order to make room for new ones." This is precisely the process of adjustment to the "equilibrium" position of Figure 3.

If it is legitimate to interpret the development of the Limitation in terms of the theoretical model, as we have done, then the generation of excess capacity in the coal trade during the thirties must be set down as the consequence of the introduction and extension of the railroad system in the counties of Durham and Northumberland. New coal seams were made available, and the increase in capacity went ahead rapidly as new producers and landlords sought to share in the gains of the Limitation. Gradually these gains dwindled until in 1845 "equilibrium" was at length attained; the whole Limitation system dissolved.

### 3. DISINTEGRATION

In view of what has been said in the last section, it is very interesting to watch the forces analyzed at work. It is the purpose of this section to show how excess capacity gradually deprived the Limitation of its *raison d'être* without the participants' in the process ever realizing the real nature of their predicament. Taken on the whole, it confirms and reinforces the reasoning and conclusions which have already been reached.

Already in 1835 the Limitation's troubles with new collieries shipping by rail were a source of much negotiation and not a little trepidation as to the fate of the regulation itself. The problem was twofold, namely, to induce the new producers to join and to make room for their output within the framework of the Limitation. The first half of the problem depended for a solution on making the new producers see that it was to their benefit to join; the second half could be dealt with either by adding to the aggregate basis and cutting down on the issues, or by redividing the existing basis and maintaining issues. As a matter of fact, ever since 1828, additions to the basis and subtractions from the issues

had been the general rule. In either case the old producers had to give up some of their quotas to the new; and this evidently involved a conflict of interests.

Both aspects of the problem are illustrated by the case of the Stanhope and Tyne Company. The latter was a private company, formed in 1832, for sinking coal mines and building a railway from the mines to the place of shipment. The railway ran from Stanhope, in northwest Durham, to South Shields, a total distance of something over thirty miles. The railway was built without an Act of Parliament. The company was reorganized in 1842, the railway being incorporated under the name of The Pontop and South Shields, which in turn fell under the domination of George Hudson in 1845.<sup>14</sup>

The Stanhope and Tyne first began shipping coal in 1835; and, following the usual custom, the United Committee opened negotiations with a view to its joining the regulations.<sup>15</sup> The company, however, refused to agree to the principle of unlimited reference, demanding guarantees as to the size of its basis; whereupon the Committee took the only course open to it and declared that "the negotiation with this company is at an end."<sup>16</sup>

The outlook was not an encouraging one. The Stanhope and Tyne would have had a basis of at least 50,000, which means that it was easily the largest concern on the Tyne,<sup>17</sup> and the trade could obviously not afford to neglect it for any length of time. Accordingly, when the question of renewing the agreement for 1836 came up, the company was again approached. Some of the members of the Committee were in favor of making a tentative offer on the question of the basis, but the Tees contingent strongly objected and insisted upon the demand for an immediate reference.<sup>18</sup>

The answer of the Stanhope and Tyne was received and discussed about a month later.<sup>19</sup> It was rejected as unsatisfactory.

<sup>14</sup> See Lewin, *Early British Railways*, p. 123; Lambert, *The Railway King*, chap. iii.

<sup>15</sup> CTTW, July 31, 1835.

<sup>16</sup> CTTW, Sept. 10, 1835.

<sup>17</sup> The bases as revised to April 11, 1835 showed Burradon and Killingworth in first place with 43,500 followed by Percy Main and Gosforth with 38,000 and 37,000 respectively.

<sup>18</sup> CTTW, Nov. 17, 1835.

<sup>19</sup> CTTW, Dec. 15, 1835.

There was a time when this would have been the signal for open trade, but the Committee had learned a great deal about dealing with new problems in the last few years and it had no intention of meekly folding up before the challenge of the new company. Accordingly it decided to recommend the continuance of the regulation but with the following significant additions:

1. The United Committee to be "empowered to adopt from time to time such measures for the governance of the trade as may appear to them most expedient, under the circumstances in which it is placed by the refusal of the Stanhope and Tyne Railway Co. to acquiesce in the agreement."

2. The shipowners be invited to coöperate in "any measure that may be deemed necessary to promote the general interest of the district."

3. The factors be likewise invited to coöperate.

This was an obvious threat to pit the whole resources of the trade against the Stanhope and Tyne, and it worked. It is not recorded when the company capitulated, but its basis was being decided by reference along with three other collieries in the following autumn.<sup>20</sup> So long as the regulation brought its member advantages worth fighting for, it had great power and influence. It was only when its own members became doubtful about the benefits to be derived that the regulation lost its cohesiveness and force.

The years 1836 and 1837 were ones of extraordinary activity. About the year 1836, Galloway reports, "in the great northern coal field the local records teem with notices of existing collieries being extended, new pits being sunk, and old ones reopened, not only as in former times for household coal chiefly, but for coking, gas-making, manufacturing, and steam purposes. Large joint-stock companies were also entering into competition with individuals and private companies."<sup>21</sup>

Chief among these joint-stock companies were the Durham County Coal Company and the Northern Coal Mining Company. The prospectus for the former was issued on May 23, 1836.

<sup>20</sup> CTTW, Oct. 3, 1836.

<sup>21</sup> Galloway, *Annals*, II, 6.

The capital was to be £500,000 in £50 shares which were quickly taken up. Royalties were leased in five different neighborhoods; and operations commenced for winning collieries. The whole affair was a failure in the long run and was finally dissolved in 1854, no more than £5 per share being returned to the shareholders.<sup>22</sup>

The Northern Coal Mining Company has an even more melancholy history. Launched in 1837 with a capital of £500,000, it commenced operations the following year, having taken numerous leases on coal property. "But in a few years the whole of the capital was expended, as well as an additional sum of nearly equal amount."<sup>23</sup>

Despite their ultimate failure, these companies helped to swell the number of new mines being sunk in these years. The flood of new capacity was to hit the trade in 1838. In the meantime, under the stimulus of rising prices in the London market, the regulation enjoyed two relatively untroubled years. The year 1838 started with the best of prospects. As though to emphasize the optimistic outlook, the Committee pasted in its minute book articles from the local press describing in lyrical terms the prosperity and constant growth of the great ports of Newcastle and Sunderland.<sup>24</sup> Further evidence of the general state of activity appears in the framing of the bond for 1838. The clauses guaranteeing 10 days' work and 30s. wages per fortnight were restored, having been out ever since the strike of 1832; while the owners were exhorted not to hire men away from each other.<sup>25</sup> There are no surer signs than these that the labor market was tight and wages in danger of going up.

More ominous signs, however, were also appearing. According to a minute of February 17, there were seven owners of collieries who had not yet appointed representatives to deal with the Limitation, and included in the list were two of the largest concerns in the whole district, namely the Durham County Coal Company and Monkwearmouth. And on May 14, a special com-

<sup>22</sup> John Latimer, *Local Records* (1857), pp. 58, 143.

<sup>23</sup> Latimer, *Local Records*, p. 87.

<sup>24</sup> *Newcastle Journal*, Jan. 13, 1838; *Sunderland Beacon*, Jan. 24, 1838.

<sup>25</sup> CTTW, March 10, 1838.

mittee submitted a report on collieries then outside the regulation. There were no less than thirteen, almost every one of which was either not yet or only just in working order. Such a large number, even if it was felt that they all would enter in due course, could not but be disturbing.

A special meeting between the United Committee and the outside collieries was held on June 25 to deal with the problem. "The depressed state of the trade" — the trade was always depressed in official pronouncements — was attributed to the fact that so many collieries were outside the regulation. A special committee was appointed to negotiate with the outside mines.

Outwardly this crisis passed by. Early in 1839 it was announced that all the unregulated collieries of 1838 had joined.<sup>26</sup> But no real relief followed. The trouble was fundamentally the new collieries, not whether they belonged to the Limitation or not. Since the owners had no power to deal with this basic difficulty, they had no choice but to attempt to suppress its manifestations. A special vend committee was formed to deal with violations of all sorts, its members to be paid two guineas a day and expenses.<sup>27</sup> The issues were divided into coast and London issues, beginning in April. The scale of prices which regulated the number of ships offered in London was reduced.<sup>28</sup> Fines of unexampled magnitude were imposed, and offenders found themselves for the first time unable to beg off.

But all to no avail. The United Committee, on June 29, called upon the subcommittee on the division of royalties "to report their opinion of the causes that have prevented the coal trade regulation during the past and current year being productive of the usual satisfactory results." The outcome, unfortunately, is not recorded.

Still the stream of new collieries continued. In July, seven new ones which had not yet joined were noted;<sup>29</sup> and early in 1840<sup>30</sup> a fresh crisis over the unregulated collieries was with difficulty avoided.

<sup>26</sup> CTTW, Jan. 5, 1839.

<sup>27</sup> CTTW, March 2, 1839.

<sup>28</sup> CTTW, May 3, 1839.

<sup>29</sup> CTTW, July 3, 1839.

<sup>30</sup> CTTW, Feb. 15, 1840; Feb. 22, 1840.



The number of special investigations undertaken in 1840 is too numerous to detail. They all ended with familiar recommendations for strict enforcement of the regulation, for improving the rotation system in London, and so forth. Not one led to any serious consideration of the underlying difficulty.

Finally things reached such a pass in 1842<sup>31</sup> that the Limitation was faced by the choice between drastic action and complete collapse. The chief grounds of complaint were (1) division of collieries after their bases had been fixed, (2) irregularities in measure, (3) the unsettled state of the over-vend, and (4) the refusal of some owners to make their monthly returns.<sup>32</sup> The remedy was to be a new set of rules<sup>33</sup> which provided for a regularization of the procedure with respect to new collieries and a tightening up on violations. An ingenious device was proposed for making fines collectible. The sum of  $\frac{1}{4}d.$  per ton on all coal carried coastwise and  $\frac{1}{8}d.$  per ton on all carried overseas was to be collected at the Customs House and turned over to the Committee.<sup>34</sup> The latter would then deduct what was necessary for the general expenses of the trade and carry the rest to a special account from which each colliery could meet fines.

Having at length adopted the new rules,<sup>35</sup> the northern owners proceeded to revise the method of sale in London. Instead of the old rotation system a scheme embodying the following points was adopted: (1) Each description of coal to have a minimum price below which no factor might sell; (2) all coal in the market to be offered for sale each market day; (3) after four days a factor may apply for a reduction in price; (4) no such reduction to be permanent.<sup>36</sup> The proposed minimum price for best coal from October to March, namely 22s., was about 1s. 6d. higher than the current price.

A semblance of unity was for a time established under the new

<sup>31</sup> There is only one entry in the books for 1841. Probably the records for the year were kept somewhere else.

<sup>32</sup> GTTW, July 2, 1842.

<sup>33</sup> GTTW, Aug. 2, 1842.

<sup>34</sup> The scheme was put into effect, apparently with the compliance of the Customs authorities.

<sup>35</sup> GTTW, Dec. 20, 1842.

<sup>36</sup> Printed circular, dated Feb. 27, 1843.

rules and regulations; but it was short-lived. In July a general meeting was called; every one seemed to be convinced that disaster was impending. Solemnly the assembled owners passed a resolution,

That, in the present critical position of the affairs and arrangements of this association this meeting consider it right to remind every coal-owner and representative of a colliery, of the imperative duty which now devolves upon him of maintaining with the utmost strictness, honor, and uprightness the articles he has signed, containing the engagements to which he is pledged, as in the opinion of this meeting, nothing can contribute more decidedly to augment the difficulties of the committee, or peril the continuance of the regulation of the trade, than any infringement at this moment, of the rules and conditions of this association.

There was calm again for a few weeks, and then another meeting:<sup>87</sup> "Either from defects in the arrangement itself, the inefficiency of the means employed in carrying its provisions into operation, or from some other cause, the objects proposed to be attained by it have not been fully realized." Hence another committee was appointed to investigate and report.

The result of this inquiry was a new set of rules, hardly a novelty by now.<sup>88</sup> Its newness consisted in provision for general revision of bases by a new "Committee of Revision" and the setting up of a "Tribunal of Appeal" to replace the old system of reference. Many of the owners hated the regulation by now,<sup>89</sup> but they were afraid of the consequences of wrecking it. The regulations were grudgingly signed.

Then came the great strike of 1844, and for nearly a year, following a general meeting of March 9, no meetings are recorded in the minute books. This is not to be taken as a sign that no concerted action was taken by the owners to break the strike. On the contrary, all the information we have goes to show that they were quite as active and quite as united as they had been in 1832. But the inference is clear that by now the Limitation of the Vend was

<sup>87</sup> GTW, Sept. 26, 1843.

<sup>88</sup> GTW, Jan. 22, 1844.

<sup>89</sup> "The regulation is denounced by its own members" (*Anti-Monopolist, Remarks*, p. 7). Gosforth colliery went so far as to explain that it thought it would be better off without a regulation, but it was willing to join "provided it could be based on equitable principles" (*Report of the United Committee*, dated Feb. 24, 1844).

a disruptive rather than a uniting force; they dropped its ponderous machinery and set up an *ad hoc* strike committee.<sup>40</sup>

The strike was broken, the union routed. But in the process the doom of the Limitation was forever sealed. When the owners met in 1845 to consider the over and short account, they discovered a "highly abnormal state of affairs" due "to the greatly diversified operation of the Pitmen's strike." Overs amounted to 199,163 tons, shorts to 475,973 tons. Lord Londonderry alone was 34,384 tons over.<sup>41</sup>

No solution was possible. *The Economist* reported the end with evident satisfaction. The combination, it said, broke up suddenly on Tuesday, May 3, 1845. The "proximate" cause was Londonderry's having exceeded his vend by near 40,000 tons. His Lordship had defended himself by saying that they were all doing it and that he would not be "faithful among the faithless." But in it all *The Economist* found a moral and hailed a victory. The moral was that monopoly does not pay even those who practice it, the victory was for free trade. The price of coal "will now be settled by fair and honourable competition, instead of, as heretofore, arbitrarily, and with only a vague reference to the great laws of supply and demand."<sup>42</sup>

#### 4. AFTER THE END

"The event, of an open trade," said Dunn in 1848, "had been long anticipated, and was greatly dreaded by experienced owners as well as viewers."<sup>43</sup> Apparently their fears were well grounded. Immediately following the breakdown of the regulation, quantities were greatly extended and prices brought so low as to bring losses even to the best collieries. Instead of 9s. 6d., which some thought open trade would produce, the owners could scarcely get 7s. on board ship.<sup>44</sup> At the same time

came the stoppage, in succession, of the Newcastle, the North of England and the Union Banks; and these banks, being greatly in advance to many of the

<sup>40</sup> See the *Report of the Commissioner Appointed under the Provisions of the Act 5 and 6 Vict.*, 1846, pp. 6 and following.

<sup>41</sup> GTTW, April 21, 1845.

<sup>42</sup> *Economist*, III, 455.

<sup>43</sup> *A Treatise on the Winning and Working of Collieries*, p. 359.

<sup>44</sup> Dunn, *Treatise*, p. 360.

colliery proprietors, forwarded, in no small degree, the progress of a deplorable crisis. In consequence, many collieries fell into the hands of their securities, at a very great loss, and were either sold at very reduced prices, or laid up altogether. Others again changed hands from the inducements held out to new men, for entering upon ready made collieries, with stock etc., at a nominal value.<sup>45</sup>

It had often been predicted that a prolonged open trade would result in the complete extinction of the small and inferior collieries with a consequent monopolization of the market by a few large producers of best coal.<sup>46</sup> It was pointed out as early as 1846 by T. J. Taylor that there was no justification for this argument, either in theory or in experience.<sup>47</sup> It assumed a non-existent correlation between size of colliery and cost of production; and, what was worse, it completely failed to recognize that collieries are not simply abandoned when they show losses, but rather their capital value is written off by the requisite amount.

As to experience, Taylor marshaled figures to prove that inferior grades of coal suffered a less reduction in price and enjoyed a greater expansion of output than the best qualities. From this fact he deduced that the degree of substitutability between the different kinds was much less than had been thought and that "in reality, the power possessed by the best coals to regulate the market is very much over-rated."

By 1848, Dunn found no reason to change Taylor's judgment. "As for the crotchet 'that the great collieries will drive the small collieries out of the market,' experience shows that the impression has no foundation."<sup>48</sup>

The idea of regulation had not been altogether given up, and numerous efforts at renewal were made. Taylor's pamphlet, which we have had occasion to quote so frequently, was written to convince his fellow coal owners of the desirability and practicability of a new regulation. But Taylor contented himself with general arguments based on the history of the trade; he had nothing to

<sup>45</sup> The same.

<sup>46</sup> This was the stock justification of the regulation. Among those who developed this argument at various times may be mentioned Thompson and Clayton in 1800, Brandling, Buddle, and Bentley in the later inquiries, and Anti-Monopolist.

<sup>47</sup> *Observations*, pp. 27, 33.

<sup>48</sup> *Treatise*, p. 364.

offer in the way of concrete proposals. "Whenever the disposition to an agreement again becomes unanimous," he thought, "there will be found ample intelligence and practical knowledge amongst the coal-owners and their representatives to constitute and administer an efficient regulation."<sup>49</sup>

Matthias Dunn took up the problem where Taylor left it.<sup>50</sup> He emphasized the argument that the machinery of government in the last regulation had become much too ponderous and unwieldy in view of the increased size of the trade. His own proposals were for simplifications in administration, publicity to enforce observance of the rules, and provision for buying and selling quotas.

With this the discussion entered a somewhat more practical stage in the calling of a meeting of all Tyne owners.<sup>51</sup> An attempt was made to conclude an agreement about prices, but nothing came of it. This attempt was followed by two more meetings in the following months,<sup>52</sup> meetings which were attended with the same negative results. The difficulties in the way of reconstructing the old regulation were too enormous; and besides, the economic basis for the Limitation — namely, complete control of the London and east coast markets — was now gradually beginning to dissolve.

Matthias Dunn concluded his *Treatise on the Winning and Working of Collieries* in 1848 on a melancholy note. The likelihood of any kind of agreement's being concluded was indeed remote, he conceded; and yet, he said, "the prosperity of the general trade is hopeless, without a well-digested regulation."<sup>53</sup>

<sup>49</sup> Taylor, *Observations*, p. 57.

<sup>50</sup> Matthias Dunn, *A Review of a Pamphlet Entitled "Observations etc." by T. J. Taylor* (1846).

<sup>51</sup> GT, Oct. 24, 1846.

<sup>52</sup> GTTW, Dec. 28, 1846; March 6, 1847.

<sup>53</sup> Dunn, *Treatise*, p. 363.

## CHAPTER XI

### THE LIMITATION AND PUBLIC POLICY

WE HAVE already seen that combination in the coal trade received the special recognition of an Act of Parliament as early as 1710. This Act,<sup>1</sup> "to dissolve the present and prevent the future Combination of Coal Owners, Lightermen, Masters of Ships, and others to advance the price of coal," was most explicit in its terms. It was followed by another in 1731<sup>2</sup> which expressly forbade anything "which should anyways relate to the keeping of turn in selling or delivering of Coals in the River of Thames."

There is no record, however, of any prosecutions under these Acts until the year 1787, when the following events, with their curious outcome, took place.<sup>3</sup> A certain George Oxlade, one of His Majesty's Tide Waiters in the Port of London, discovered that all the coal buyers had for years been receiving rebates from the coal owners contrary to the provisions of the Acts of Parliament described above. He instituted suit against all of them, hoping to enrich himself out of the fines payable to an informer. When one of the suits was tried and lost only through a technicality of wording, the whole trade took the alarm and hastened to petition Parliament for an Act to exonerate them. Their representatives testified to the House that the rebate was merely the form in which the coal buyers received their remuneration — with how much truth it is impossible to guess. At any rate, "An Act to Indemnify and save harmless all Persons who may have incurred penalties or forfeitures under 9 Anne c. 28 and 4 Geo. 2, c. 30 and for the better preventing of Combinations in the Trade of Coals"<sup>4</sup> was rushed through.

Thus on the first occasion when it was proposed to enforce the brave words about combination, the House hurriedly assured the

<sup>1</sup> 9 Anne, c. 28, made perpetual by 1 George I, c. 26.

<sup>2</sup> 4 George II, c. 30.

<sup>3</sup> This story is taken from H. B. Dale, *Fellowship of Woodmongers*, pp. 89-90, and H. G. McNab, *Letter to Whitemore*, p. 10.

<sup>4</sup> 28 Geo. III, c. 53 (1788).

combinators that that was by no means the intention — adding more brave words to salve its conscience: "Any number of Persons united . . . in any way whatsoever, consisting of more than Five Persons for the purchasing of coal for sale or for making regulations with respect to carrying on the said trade in Coals, shall be deemed and adjudged to be an unlawful combination to advance the price of Coals."

A few years later another attack on combinations in the coal trade was prepared. One George Ward Errington, lessor of a mine from the Duke of Northumberland, brought suit against the members of the Committee of the Coal Trade. He specially requested a trial outside Newcastle or Northumberland, on the grounds that the great wealth and influence of the coal owners would make a fair trial in those places impossible. This was granted, but the case never came up for trial.<sup>5</sup> Errington explained to the Committee of 1800 that he had fallen ill, remaining so for two years. Thereafter his ardor was so much abated that he discontinued the suit, "partly from a sort of indifference about the object of it." But, he said, he had not changed his mind about the Limitation.<sup>6</sup>

The Committee in reporting its views to the House was very circumspect and indirect in dealing with the question of legality. It refused to say that the Limitation was illegal or to advocate its prosecution; on the other hand, it advocated further legislation to suppress the regulation.<sup>7</sup> It goes without saying that no amount of legislation does any good, except perhaps to those who pass it, so long as no attempt is made to enforce it. And the plain fact is that neither in 1800 nor at any other time was the government prepared to raise a finger to enforce the laws against combination in the coal trade. Nevertheless, the passage of laws which it was never intended to enforce, was — and still is — a good way of appearing to look out for the interests of (unorganized) consumers without in the least hurting the interests of (organized) producers.

<sup>5</sup> *Report . . . of the Coal Trade*, 1800, Appendix 41.

<sup>6</sup> *Report . . . of the Coal Trade*, 1800, p. 564.

<sup>7</sup> "Your Committee humbly submit to the House the propriety of adopting effectual means, by additional penalties or otherwise, of enforcing the existing laws against all compacts and agreements of the nature above described" (*Report . . . of the Coal Trade*, 1800, p. 641).

The Report of 1830 was even meeker in its recommendations.<sup>8</sup> It made no mention of the question of the legality of the regulation. On the contrary it preferred to leave the trade "to the control of that competition which appears already to have affected it; and as long as the districts we have named are not included in the regulation (which we trust will not happen) the effect upon the market of the supply they are capable of affording cannot fail to be felt."<sup>9</sup> Naturally the legislation arising out of the inquiries of 1829 and 1830 left the Limitation out altogether.

The Committee of 1836 had a different origin, and the results of its labors were more positive; in what sense we shall see. Anti-Monopolist's account of how the investigation of 1836 came to be instituted is worth quoting:

In the year 1836, an extraordinary movement took place. Who were its real instigators never sufficiently appeared. But, all at once, the streets of London rung with imprecations against the coal-owners of the north; the wildest and most senseless vituperations were roared aloud; every art and device was resorted to to inflame public indignation, to excite a general ferment, and a sort of phrenzy ensued. The Lord Mayor for the year, one Wilson by name, a weak and ostentatious personage, lent himself to the infatuation, and converted his justice room into a forum for stupid and malevolent diatribes against the respectable body of men marked out for proscription. Canal proprietors and inland coal-owners, stirred by motives of self-interest, used him as their instrument, and prevailed upon him to set the Mansion-house in a blaze with Staffordshire coal, and to give his assurance to the world that it was superior to the best Wallsend. As usual in cases of public delirium, the delusion extended and reached high places. The primate, the Archbishop of Canterbury, moved with holy horror, it was boasted, had precipitately cast his "monopolist" coals into the river, and crammed the vast cellars of Lambeth with the righteous substitute recommended by the potentate of the east. Others did likewise according to their means, and a total revolution in the coal trade was threatened. Amidst the turmoil Mr. Joseph Hume raised his voice and swelled the chorus of clamourers. He then sat for Middlesex and was noted for a sturdy intermeddler. He got up "in his place," and uttered a stentorian tirade, replete with incongruous garrulity. Mr. Matthew Bell administered to him a remarkable rebuke, enlightened the House with a true statement of facts, and demanded, on the part of the coal-owners, a committee of inquiry. Hereupon Mr. Hume joined issue, and accordingly, on the first of June a select committee was appointed.<sup>10</sup>

<sup>8</sup> It is worth remembering that the investigations of 1829 and 1830 were set on foot by the coal owners themselves.

<sup>9</sup> *Report . . . of the Coal Trade*, 1830, p. 18.

<sup>10</sup> Anti-Monopolist, *Remarks*, pp. 33-34. Hume was chairman of the committee.



Despite the popular feeling against the Limitation, the Committee of 1836 was no bolder than its predecessors. It explored the question of the legality of a proposed joint-stock company to deal in coal in London. Legal opinion was unanimous that such a venture would be in contravention of the Act of 1788.<sup>11</sup> But the possible bearing of the Act on the Limitation escaped the vigilance of the Committee! As a result of this "oversight," the proposals of the Committee for remedial legislation appear strange, to say the least. It recommended, according to custom, that "every means of promoting a new supply be encouraged" — which was hardly necessary in view of what was already happening in this respect — and it recommended "that a Bill should be forthwith introduced to repeal the prohibitory enactment in the second section of the 28 Geo. 3, c. 53,<sup>12</sup> so as to leave the Coal Trade free in the Port of London to the competition of capital and enterprise, which are now excluded by the penalties of that Act."<sup>13</sup>

Parliament promptly acted upon this recommendation. By 6 and 7 William IV, c. 109 (1836), the Acts of 1710, 1731, and 1788, so far as they referred to combinations in the coal trade, were all repealed. The net effect was to legalize the Limitation of the Vend for the first time since the early eighteenth century!<sup>14</sup>

While it is, of course, not legitimate to generalize from any one case, it may nevertheless be said that this example adds one more item to the already overwhelming mass of evidence which goes to prove the futility of expecting an effective anti-monopoly policy from a capitalist state. The Limitation disappeared, but through no action on the part of the state. In more favorable conditions it would have waxed and grown fat.

<sup>11</sup> *Report . . . of the Coal Trade*, 1836, p. xxxvii.

<sup>12</sup> Quoted above, pp. 130-131.

<sup>13</sup> *Report . . . of the Coal Trade*, 1836, p. xliii.

<sup>14</sup> The Act of 1836 actually did hasten the end of the Limitation, though in a way quite unforeseen by its authors. It enabled the Durham County Coal Company and the Northern Coal Mining Company, the two joint-stock ventures mentioned previously, to enter the field of coal production. In so far as they contributed to the rapid expansion of productive capacity, they of course hastened the dissolution of the Limitation.

## CHAPTER XII

### CONCLUSION

#### I. THE HOSTMEN'S GUILD AND THE LIMITATION

THE THEORY has been advanced that the Limitation of the Vend in its eighteenth- and nineteenth-century form was essentially the old hostmen's guild in a new guise.<sup>1</sup> This study should have made it clear that this is at best a misleading way of stating the case. The matter can best be clarified by analyzing the functions performed by the two institutions.

The guild, in so far as it was an organization of coal dealers, that is to say after about 1550, performed the function of limiting the number of those who might engage in the coal trade. The power to perform this function belonged to the guild both by custom and by explicit grant in the charter of 1600. The power to exclude outsiders from engaging in the business of *mining* coal was, to be sure, not bestowed upon the hostmen, but they succeeded until well along in the seventeenth century in achieving this end through the exploitation of their undisputed sole right to sell coal. The Company of Hostmen had its roots in the legal framework of the medieval town economy, but the only function of the guild system which was properly applicable to the capitalistic coal trade was that of regulating the number of traders; the regulation of price, quantity, and exchange relationships had already been undertaken by the forces of a more or less impersonal market.

Capitalists, of course, are not altogether helpless in the face of the forces of the market. Under suitable conditions they can and do combine to influence the market in a manner favorable to their own ends. Nor were the hostmen-capitalists more backward in this respect than their successors at a later date. But, and this is the important point, they found no authority for such action either in the express terms of their charter or in the rulings of a friendly central government. Their "partnership" for regulating output and

<sup>1</sup> Hermann Levy, *The New Industrial System* (1936), p. 32.

prices formed in 1605 was, it will be recalled, dissolved by special order of the Privy Council; and when Charles I, at his wits' end for new sources of revenue, attempted in 1637 to grant the hostmen the right to form a selling combine, the outcry which went up from shippers and consumers alike forced him to beat a hasty retreat.

The Limitation of the Vend, on the other hand, was an institution specifically designed to accomplish the two-sided function of limiting output and raising prices. It did not even pretend to have the power to limit entry to any branch of the coal trade; and, as has been clearly demonstrated above, the lack of this power eventually proved its undoing.

The fact that the guild and the Limitation performed different functions does not mean that they were in no way related to one another; it means simply that the Limitation was not the guild in a new form. The truth is that the Limitation had its origins inside the framework of the guild and developed its greatest strength only after the last pretense to exclusive privileges in the coal trade had been finally abandoned. The principle of restricting output and raising prices which formed the essence of the Limitation was probably resorted to even before the legal incorporation of the Company of Hostmen in 1600. During the seventeenth century, arrangements for accomplishing this end were repeatedly attempted; and during the eighteenth century these efforts persisted and gradually took on the shape of a continuous and more or less stable institution which came to be known as The Limitation of the Vend.

## 2. THE ESSENTIAL NATURE OF CAPITALIST COMBINATION

The orthodox theory of competitive equilibrium has the great merit of directing attention to those forces which, if unchecked, undermine the profit margin which is the proximate end of business activity. The weakness of orthodox theory lies in its failure to perceive that, so long as capitalism persists, the influences which work to check these forces must on the whole be successful. Failing to perceive this truth, orthodox theory has never analyzed the immensely significant processes whereby the profit margin is preserved as the mainspring of the capitalist mechanism.

Profit is the difference between receipts and costs, and the forces acting on profit do so through one or both of these components. Orthodox theory has laid special emphasis on three such forces: (1) mutual competition among existing producers for the largest possible share of the market, which drives down selling prices; (2) mutual competition among existing producers for the available means of production, which drives up costs; and (3) — if these two forces fail to bring receipts down to the level of costs — the entrance of new producers, which intensifies competition to the point at which this balance is attained.<sup>2</sup>

The influences which at different times and in varying degrees counteract these forces and preserve a margin of profit may be set out as follows:

1. Producers may combine and abate their mutual competition for the largest possible share of the market.
2. The market itself may expand sufficiently to mitigate or nullify the effect of such competition on selling prices.
3. Producers may combine and abate their mutual competition for the available means of production.<sup>3</sup>
4. The available means of production may expand sufficiently to mitigate or nullify the effect of such competition on costs.<sup>4</sup>
5. Producers already in the field may combine to restrict the entry of newcomers.

<sup>2</sup> It is obvious that under the assumptions implicitly or explicitly adopted by orthodox theorists, namely, static conditions and classless society, these forces are adequate to produce a profitless stationary state. If it be granted that such a profitless stationary state is incompatible with capitalism, then it follows that the analysis of capitalism requires either (1) dropping the assumptions of static conditions and classless society, or (2) admitting that the forces enumerated above are checked before they work out to their logical conclusion. I think both courses should be followed, and in fact the analysis of this chapter attempts to do so.

<sup>3</sup> In this connection, of course, combination against employees is of first importance. All of the combinations in the coal trade after 1770 had this as one of their features, and I suspect the same is true of earlier ones as well. In what follows, however, this aspect of combinations in the coal trade is neglected as being of relatively minor importance.

<sup>4</sup> This possibility may be of great importance under certain circumstances; it is my opinion, for example, that the encouragement which American government and industry long gave to immigration can only be understood in such terms. Since, however, it played little, if any, part in the course of events discussed here, we shall have no occasion to mention the possibility further.

These brief statements about the nature of what may be called profit-preserving forces are necessarily incomplete. In particular, the language employed fails to suggest the *necessary* part played by the state in shaping and determining their form and strength. The framework of legal institutions within which the economy functions is itself either favorable or inimical to combinations among producers. Furthermore, active political power may be thrown on the side of assisting or even forcing combination on the one hand, obstructing or even prohibiting it on the other.<sup>5</sup> The statement, therefore, that "producers may combine" means they may do so legally or illegally, with or without the assistance or insistence of the constituted authorities.

It should now be clear that the essence of capitalist combination consists in setting in motion or stimulating one or more of the profit-preserving forces listed under 1, 3, or 5 above; for convenience, the aims to be attained may be designated as (a) maintaining selling prices and limiting output, (b) depressing cost prices, and (c) restricting entry to the field.<sup>6</sup> Doubtless an "ideal" combination has machinery for accomplishing in greater or lesser degree all three of these ends;<sup>7</sup> but in a great many cases it is either impractical or unnecessary, or both, to attempt to act in such a way as to accomplish all of these aims at the same time.

The fact that a combination is incomplete in the sense that it is unable to perform one or two of the profit-preserving functions does not necessarily mean that it is worthless to its members, though in certain conditions it will mean this. Evidently, for ex-

<sup>5</sup> In analyzing actual processes through time, it should be evident that neither legal framework nor state policy can be taken as given. Both are in fact inextricably intertwined with the power, attitude, behavior and achievements of producers themselves. In any realistic view of the matter, these are all interdependent variables.

<sup>6</sup> It will be remarked that one profit-preserving force, and in fact the one generally stressed by orthodox economists, has been altogether omitted from this analysis. I refer, of course, to the reduction of costs through improvement in methods of production or, more generally, what Professor Schumpeter calls "innovation." It is omitted because innovations typically bear little direct relation to the rationale of capitalist combination. Here we regard this as one of the forces (and probably the most important) acting to change methods of production. Changes in methods of production will be shown to be of immense importance for our problem.

<sup>7</sup> The so-called "corporative state" may perhaps best be defined as an economy made up of such ideal combinations.

ample, price and output control exercised in a static market without restriction of entry is bound to prove futile. On the other hand, if entry is naturally or technically difficult and takes time and expense, and if the market is expanding sufficiently rapidly, price and output control may be a very profitable proposition. Again, it is clear that the restriction of entry into a field of production is almost always at least somewhat beneficial to those already in possession, even if mutual competition cannot be controlled. In short, the profit-preserving forces which are set in motion through combination may be mixed in varying proportions with those other profit-preserving forces which result from economic expansion.

### 3. CONDITIONS FAVORING COMBINATION

The specification of general conditions which favor the development and survival of combination is not a difficult task. To each such set of conditions, furthermore, there corresponds a converse set of those which discourage or render impossible the growth of combination. These conditions can be classified into three main types: (1) natural, (2) technical, and (3) social. These three main types will be considered in turn, though in fact the relative strength of each cannot be evaluated in isolation.

(1) By natural conditions we mean chiefly the geographic and climatic conditions which determine within limits the location and extent of areas outside of which many commodities cannot be advantageously produced. It hardly requires elaborate argument to demonstrate that, other things being equal, a combination is easier to engineer the smaller and more clearly defined is the area to which production must of necessity be confined. Natural conditions are, of course, particularly likely to be important in the case of raw materials; while, at the other extreme, there are many commodities in the production of which they play a negligible role. Commodities which fall into the latter category, and can therefore be readily produced nearly anywhere, are difficult to bring under the control of a combination.

There is nothing absolute about the concept of a restricted potential producing area, as an example will make clear. There are some five hundred square miles of anthracite coal lands in the north-

eastern part of Pennsylvania. Judged in relation to the whole United States as the market for anthracite, this is obviously a very small producing area; and it need occasion no surprise that combination has been the most widely known characteristic of the anthracite industry from a comparatively early time. And yet it is obvious that if the use of anthracite had been confined to the immediate vicinity of the mines the potential area which might have been opened up to production would have seemed relatively enormous.

(2) This consideration leads naturally to technical conditions, the second main type of conditions favoring combination. Both the size of the potential producing area and the size of the market which it serves evidently depend in a direct manner on the technique of production and transportation. The importance of the relationship between size of potential producing area and size of market has already been noted.

The technical factor is the main determinant of another relationship of key importance, namely, the size of the optimum producing unit relative to the extent of the market. A large optimum unit (relative to the market) means few producers or at least a persistent tendency to reduction in numbers. Combination is unquestionably favored by fewness of producers. And if those few are necessarily confined to a restricted area of production, the chances of their getting together are *pro tanto* improved.

Technical, unlike natural, conditions change in the course of time; and it is at least in part through observing the impact of such change on the optimum scale of production, the size of potential producing area, and the extent of the market that a consistent explanation of the development of combination can be achieved.

(3) Of the indefinitely large number of social conditions which might be enumerated, it will be necessary to stress only the following: population and its distribution, standard of living, legal system, and attitude of the constituted authorities.

The first two, which may be called "economic conditions," determine, along with technique of transport, the extent of markets tributary to a given producing area. The last two items enter the picture on a somewhat different level in that they do not primarily

act upon the scale of production, the size of producing area, or the extent of the market. A prevailing legal system makes easy or difficult the formation of combinations of various kinds; while the constituted authorities, acting within a given legal system, may encourage or discourage combination. Taken together these two factors may be said to constitute the most important "political conditions"; and their importance at any time is evidently closely dependent upon the state of the natural, technical, and economic conditions.

The somewhat formal and abstract classification undertaken in the preceding paragraphs has served to isolate certain variables which play an important role in the development of combination and to bring to light the forces which determine the magnitude and direction of change of those variables. The usefulness of such a conceptual scheme, however, is best tested by applying it to a particular case, and in order to do so we return to the coal trade.

#### 4. COMBINATION IN THE COAL TRADE

Until the introduction of the steam railroad in the third and fourth decades of the nineteenth century, mining enterprise on a significant scale could exist only in the immediate vicinity of navigable waterways. Producing areas were strictly limited to strips extending perhaps five or ten miles on either side of navigable rivers, while the distance from producing area to market had necessarily to be measured in water miles.<sup>8</sup> Under such circumstances, the supremacy of Northumberland and Durham in the coal industry was assured. Not only were there rich coal-bearing lands adjacent to the Tyne and Wear near their mouths, but also the latter were within easy reach of the great markets of the east and south coasts by a direct sea route.

At the time when the coal industry first burst into national prominence, there were elements in the situation working in favor of, and others working against, successful combination in the northern counties. The scale of production was such that a relatively

<sup>8</sup> It is worth noting that canals never played an outstanding part in the coal industry for the reason that few of them were capable of handling a significant volume of coal traffic in addition to their more remunerative general trade.



few producing units could easily supply the existing market, a fact which in itself was surely favorable to combination. On the other hand, by no means all the accessible coal land had been taken up, and capital was only too anxious to crowd into this lucrative field. Obviously combination would have to have as one of its chief objectives the limitation of entry to the business. These circumstances taken together were sufficient to ensure that the mine owners would in fact attempt to combine and make an effort to reserve the trade to themselves and their appointees.

The form which this effort assumed as well as its failure to develop continuous machinery for price and output control, despite numerous attempts, are both to be accounted for in the peculiarly confused political conditions of the time.<sup>9</sup> The Hostmen's Company, with its somewhat doubtful title to exclusive rights inherited from a rapidly disintegrating legal system, presented itself to the larger coal owners as the most promising instrument for accomplishing their ends. Their successful struggle for control of the Company and the town government has already been recounted.<sup>10</sup> After entrenching themselves in power locally, they approached a central government which was never averse to selling special privileges and obtained official confirmation of the assumed rights and immunities attaching to the Hostmen's Company.

A combination to control price and output, however, ran counter to well-recognized principles of the common law, as enunciated in the so-called Case of Monopolies (1603) and reaffirmed in statutory form in the Statute of Monopolies (1624).<sup>11</sup> As we have already seen, the attempts of the Hostmen-capitalists to establish price and output control, lacking legal backing, failed in the face of determined opposition on the part of shippers and consumers.

The situation did not change materially until the Civil War, but during the latter half of the seventeenth century the pressure of new capital entering the coal trade, coming on top of the disorganiz-

<sup>9</sup> The expression "political conditions" is to be understood in the sense defined above.

<sup>10</sup> See above, Chapter I.

<sup>11</sup> W. H. Price, *The English Patents of Monopoly* (1906), pp. 23-24 (on the Case of Monopolies) and Appendix A, where the text of the Statute of Monopolies is reproduced in full.

ation of the war period, quickly robbed the Hostmen's Company of its usefulness to the large mine owners. The Company tended to divide into a group of owners and a group of fitters acting more or less independently of each other; and by 1700 the term "host-man" was in popular usage synonymous with "fitter." The old combination, based on the legal foundations of the guild system, had disintegrated and nothing had as yet arisen to take its place.

The indications are, however, that the expansion of the market was proceeding at a sufficiently rapid pace to keep the trade a profitable one in spite of the entry of new producers, particularly on the Wear, and in spite of the absence of any systematic machinery to control price and output. From 1700 to 1720, for example, imports into London increased from 335,000 to 425,000 London chaldrons,<sup>12</sup> while the few price quotations available for this same period suggest that price was well maintained until 1720.<sup>13</sup> Under the circumstances, the need for combination was probably not felt to be urgent.

All this while, and in fact throughout the eighteenth century and the first three decades of the nineteenth century as well, changes due to improvements in technique were not of such a nature as to upset the basic relationships established early in the history of the trade. The area of coal land susceptible of development increased — first in width, with the introduction and gradual improvement of rudimentary rail transport, and second in depth, as improved techniques of ventilation and pumping allowed lower seams of coal to be tapped. At the same time, thanks to these and other developments, the optimum scale of production was steadily expanding. These movements were in general gradual and over the whole period probably less than sufficient to keep pace with the expansion of the market. The latter, however, tended to be uneven and hence periodically to upset the balance of forces in such a way as to favor or discourage combination, while the changing legal and political climate determined what form and what direction combination should take.

<sup>12</sup> Ashton and Sykes, *The Coal Industry*, p. 249.

<sup>13</sup> The price relative based on 1720-44 = 100 stood at 102 in 1707 and at 104 in 1720 (Price History data). See Appendix A for method of shifting harvest-year data to a calendar-year basis.

From about 1720 to about 1750, the market appears to have remained very nearly stationary, with only such ups and downs as can be accounted for by good years and bad. The great "natural" profit-preserving force — expansion of the market — bogged down for the time being. The coal owners consequently turned once again to combination.

The leaders in the movement this time were the so-called Grand Allies, a coalition of the three largest producers on the Tyne. The prohibitory provisions against combination in the coal trade, contained in the Act of 1710, seem to have had no further effect than to enforce secrecy in the activities of the Grand Allies. Their aim, pursued with methods more characteristic of a later time, was to exclude new entrants to the field by buying up royalties and way-leaves and to force their competitors into a satisfactory regulation of price and quantity.

TABLE 11  
AVERAGE ANNUAL QUANTITY IMPORTED INTO LONDON, IN THOUSANDS OF  
LONDON CHALDRONS, AND AVERAGE PRICE PAID BY THE GREENWICH  
HOSPITAL, IN SHILLINGS PER LONDON CHALDRON, BY  
5-YEAR PERIODS, 1720-1749

<i>Period</i>	<i>Quantity<sup>a</sup></i>	<i>Price<sup>b</sup></i>
1720-24 .....	451 .....	26.8
1725-29 .....	484 .....	26.8
1730-34 .....	465 .....	26.6
1735-39 .....	485 .....	27.5
1740-44 .....	484 .....	29.1
1745-49 .....	476 .....	28.8

<sup>a</sup> Ashton and Sykes, *The Coal Industry*, p. 249.

<sup>b</sup> Price History Data.

The trade was dominated by the Grand Allies from the early 1730's to 1749, when the last recorded regulation before 1771 lapsed. Their success in pulling up prices in spite of a stationary market is well demonstrated by the figures given in Table 11; while we have the testimony of William Brown that under the system in force from 1746 to 1749 "there is as much profit arrises at the vending ten thousand chalders as there is at thirty when there is a fighting trade." <sup>14</sup>

<sup>14</sup> See above, p. 30.

The period 1750-1770 was characterized by very rapid expansion in the market and, once again, by absence of combination. Table 12 brings the figures set forth in Table 11 down to 1769.

TABLE 12  
CONTINUING TABLE 11 FOR THE YEARS 1750-1769

<i>Period</i>	<i>Quantity</i>	<i>Price</i>
1750-54.....	508.....	27.4
1755-59.....	507.....	34.6
1760-64.....	549.....	33.7
1765-69.....	616.....	31.1

The following would seem to be a plausible interpretation of these figures: After the restriction practiced by the Grand Allies, a sharp increase in demand during the fifties met a relatively inelastic supply. The result was a large increase in price and, naturally, the stimulation of new investment. As this new capacity entered upon production during the sixties, the quantity placed upon the market rapidly expanded and price gradually subsided to less profitable levels.

So far, in fact, did the reaction proceed that agitation for a combination was renewed. The result is well known: in 1772 *The Limitation of the Vend*, properly so-called, was launched upon its long career.

For the next sixty years the balance of forces which allowed the *Limitation* to lead a very nearly continuous, if somewhat unstable, existence was delicately maintained. The area of developed coal land could not be readily expanded except at a prohibitively high cost, and there were even signs that some of the most favorably situated seams were nearing exhaustion. On the other hand, the temptation to enlarge already existing enterprises was strong; so strong, in fact, that had the market been stationary it certainly would have been sufficient to wreck the *Limitation*. But the market was fortunately expanding just about rapidly enough to allow the various individual producers already in the field to enlarge their enterprises and still avoid disaster to the *Limitation*.

Political conditions during the century from 1750 to 1850 were as nearly as possible neutral in respect to combination. The law forbade anything which smacked of combination in the coal trade,

and consequently it would have been difficult for the state to lend assistance to the coal owners in the accomplishment of their ends. On the other hand, the constituted authorities were not at all disposed to enforce the law. The best solution was simply to ignore the coal owners, and this, in fact, was the course pursued. The various investigations which were undertaken between 1800 and 1838 resulted in the establishment, or abolition, or both, of a great many rules regarding the conduct of the trade in London. The coal owners in the north, however, escaped with nothing worse than a gentle reprimand.

This delicate balance was abruptly upset by the introduction of the steam railroad. After 1830 the size of the potential producing area expanded very much more rapidly than either the market or the optimum scale of production. One revolutionary innovation in technique broke down what had hitherto been natural barriers to the expansion of the producing area and robbed the Limitation of its protection from a flood of new producers seeking to share in the benefits of controlled prices. Within the relatively short space of two decades after the opening of the Stockton and Darlington, the Limitation was completely inundated.

A second result of the railroad, which, however, had scarcely begun to manifest itself until after the Limitation had already lost its hold, was a still more enormous increase in the size of the producing area through the linking of other coal fields, particularly in the Midlands, to London and the East. This development constituted not only an extension in size but also a tremendous decentralization of the producing area.

This second effect sealed the fate of combination in coal for nearly a century. At no time since 1850 has there been the slightest chance of a successful voluntary combination. The task could be accomplished only with the active assistance of the central government. For a long while the British government did not feel it necessary to undertake such intervention, doubtless because the unrivaled expansion of British industrial capitalism greatly mitigated the rigors of excessive competition. The downward trend in coal which followed the World War, however, destroyed the beauties of *laissez-faire* and therewith the rationale of a non-inter-

ventionist policy. The Coal Mines Act of 1930 is an implicit recognition of the fact that profits in the coal industry can now be preserved only by state-fostered monopoly.<sup>15</sup>

##### 5. MONOPOLY AND COMPETITION IN THE DEVELOPMENT OF CAPITALISM

It was with the hope of gaining an insight into the larger problem of the relation of monopoly and competition to capitalist development as a whole that this study was originally undertaken. This being so, it is clearly incumbent upon the author to close with a brief attempt to justify the work in terms of its avowed purpose.

It has been shown that there were certain reasonably isolable historical variables which in their interrelation determined to a large extent the form and degree of competition in the coal trade. Expansion of markets, technological changes, political action, all conspired to bring about the results briefly outlined in the last section. In the nature of the case, however, these factors must be largely external to any one industry and hence incapable of theoretical explanation in terms of the logic of its development. Taking the capitalist system as a whole, however, they are clearly internal and hence their movements must be capable of formulation in terms of the logic of that system as a whole.<sup>16</sup>

Capitalism originated as an economic force within the institutional and ideological framework of feudal society. It brought into being with it its own institutions and ideology which at first existed as isolated cells within the body of feudalism. At this stage capitalism was primarily commercial in character. As it expanded, the sphere of influence of capitalist law and culture widened and at length completely supplanted the earlier forms. An essential part of this process was the establishment of strong central governments dominating areas wide enough to permit the development of secure

<sup>15</sup> On the Coal Mines Act of 1930, see A. M. Neuman, *Economic Organisation of the British Coal Industry* (1934), Part III, esp. chap. iii.

<sup>16</sup> At this point I should like to register an emphatic rejection of the point of view, perhaps dominant among academic economists, that state action is in some way an "outside" force as far as the capitalist economy is concerned, and hence that the "pure logic" of capitalism can be studied in abstraction from political forces. This is, however, not the place to argue the matter *in extenso*.

and unmolested trade. Monarchies were the only possible form which these central governments could take under the circumstances, and thus it was that the absolutist governmental institutions of the feudal era became closely tied up with the rising tide of commercial capitalism.

It is important to understand that the grants of monopoly and special privilege which characterized Tudor England were one aspect of this development. The dispensing of patents of monopoly was a source of power to the central government and at the same time a very substantial encouragement to the growth of national industries. In the nature of the case capitalism was cradled in monopoly and state paternalism.

During the seventeenth and eighteenth centuries, as the rising commercial classes became progressively stronger and more self-assured, they moved to eliminate the arbitrary elements inherent in monarchical government, aiming at the same time to match their economic power with a commensurate political power. The struggles which ensued generated an ideology of opposition to special privileges which was of necessity generalized. At the same time that state backing for monopoly was thus weakened, underlying trends destroyed its economic rationale.

The growth of a spirit of enterprise and the steady improvement of means of transportation expanded the scope of markets and producing areas, while the changing technique of industry opened up ever new fields for the profitable investment of rapidly accumulating capital. Neither the political nor the economic climate was favorable to the growth of new combinations among capitalists, while those already in existence found their position steadily undermined. It was only where special conditions prevailed, as in the Coal Trade of the North, that combination survived into the nineteenth century. The "classical" era of free trade, free competition, and laissez-faire was no more than a logical development of early capitalist conditions. Adam Smith, faithfully reflecting the trend of the times, saw it coming; the railroad, the greatest single technical innovation in history, assured it a glorious and vigorous life of about a half a century. For it was, paradoxically enough, the railroad, itself a natural monopoly, which, by its unprecedented

expansion of the economic world, rendered competition both possible and profitable.

The absence of any but the most cursory discussion of monopoly by the great economists of the nineteenth century is no accident. Ricardo, John Stuart Mill, Marx, Jevons, Menger, and a host of others were, if anything, keener observers of the contemporary scene than their more academic successors. They did not elaborate the principles of monopoly for the very simple reason that it was a problem of very little practical importance. Nevertheless, the seeds of future monopolies were being sown with a liberal hand by the engineers and technologists of the period; and this fact Marx alone recognized and put into the forefront of his scientific work. "The battle of competition," he said, "is fought by cheapening of commodities. The cheapness of commodities depends, *ceteris paribus*, on the productiveness of labour, and this again on the scale of production. Therefore, the larger capitals beat the smaller."<sup>17</sup> Until roughly the middle of the nineteenth century the expansion of markets and producing areas far overshadowed in importance the growth of the scale of production. Since the middle of the nineteenth century this relationship has been reversed. Not that markets and producing areas ceased at once to expand; far from it; but after 1850 machine technology and large-scale production, together with their institutional image, the corporation, became the dominant factors in capitalist development. Engels, preparing the third volume of *Capital* for publication during the eighties, saw clearly the outlines of the new industrial order;<sup>18</sup> while Thorstein Veblen, the great American economist, developed the theme with rare insight and truly prophetic vision shortly after the turn of the century.<sup>19</sup> The growth of large-scale production rendered combination both easy and attractive; the tendency which it engendered for productive capacity to outrun the market made

<sup>17</sup> *Capital* (Kerr ed.), I, 687.

<sup>18</sup> In a note appended to a discussion of joint-stock companies by Marx, Engels said: "Since Marx wrote the above, new forms of industrial enterprises have developed, which represent the second and third degree of stock companies. The daily increasing speed, with which production may today be intensified on all fields of great industry, is offset on the other hand by the ever increasing slowness, with which the markets for these increased products expand." (*Capital*, Kerr ed., III, 518.)

<sup>19</sup> *The Theory of Business Enterprise* (1904).



it absolutely essential. For competition, become cutthroat competition, threatened the very basis of capitalist society, the continuance of profits.<sup>20</sup>

Only in brief transitional periods can the sovereign power of the state operate against the interests of the ruling economic class in society. The decades covering the late nineteenth and early twentieth centuries constituted no such period. The state rushed to the rescue long before the threat to the capitalist system involved in the growth of machine industry developed serious proportions. Modern militant imperialism was the direct outgrowth of the need for expanding markets. And if the state everywhere except in Germany was slow to adopt a policy of actively assisting capitalists to combine, this was only because the competitive ideology of the nineteenth century was firmly rooted and difficult to overcome. Imperialism had its inevitable outcome in the World War; and the economic chaos which followed, somewhat delayed in the United States, wiped out the last vestiges of reluctance on the part of capitalist governments to salvage by every possible means the tottering profit system. Carried to its logical conclusion, this process leads straight to fascism, which solves the problems of the machine age by creating a vast market for armaments which will in turn be used to wrest markets away from rival powers.

The solution is only apparent. Fostering of monopoly at home and the autarchic policies which necessarily accompany preparations for expansion abroad serve further to contract markets and outlets for investment. More monopoly, more autarchy, more imperialist expansion, follow each other in an endless chain, interrupted by an occasional extraneous link which misleads only the unwary. A new world war, which it is difficult to imagine that the

<sup>20</sup> Engels continued the note cited in footnote 18 above as follows: "The results are a chronic overproduction, depressed prices, falling or disappearing profits; in short the long cherished freedom of competition has reached the end of its tether and is compelled to announce its own palpable bankruptcy. This is shown by the fact, that the great captains of industry of a certain line meet for the joint regulation of production by means of a kartel. In some cases even international kartels were formed temporarily. . . . The antagonism of interests between the individual firms broke through the agreement quite frequently and restored competition. This led in some lines, where the scale of production permitted it, to the concentration of the entire production of this line in one great stock company under one joint management."

capitalist system will survive, is the only conclusion to which one can logically look forward.

The arguments of this concluding section may appear to have carried us far from our starting point, but this is not really so. Intensive study of a particular sector of the economy first led to the isolation of what appeared to be the main active forces in determining the organization of producers. It was then a natural step to attempt to observe the action of those forces in the economic process as a whole. The conclusions so reached are obviously tentative; they are set forth here, however, because it seems likely that the insight gained by pursuing this method is sufficiently enlightening to warrant a great deal of further study along the same general line.

## **APPENDICES**

## APPENDIX A

### THE EFFECTS OF THE LIMITATION ON COAL PRICES AND QUANTITIES

IN THIS appendix, we shall attempt to assay the effects of the Limitation on the course of prices and quantities in the coal trade, both in terms of the trade itself and in its relation to the rest of the economic system. This is, so far as I know, the first attempt to carry out such an investigation for the early nineteenth century, though of course the study of monopoly and combination in later times has been carried much farther in many cases.

The material we shall use consists of various time series which will be described as we proceed. For purposes of comparison with general economic conditions we shall use Silberling's well-known index <sup>1</sup> and Thorp's *Business Annals*.<sup>2</sup> Many of the conclusions drawn are obviously in the nature of guesswork; but a guess which is based on some evidence and thought is surely better than nothing.

#### I. THE SHORT-RUN EFFECT OF SUSPENDING THE REGULATION

For purposes of examining this problem we shall use a monthly price series. Material for such a series is available from 1807 through 1844, with the exception of the year 1839. For the period 1807-1837 inclusive, it comes from parliamentary reports;<sup>3</sup> for 1838, from a contemporary pamphlet,<sup>4</sup> the accuracy of which has been checked against the Parliamentary figures for the preceding two years; and for 1840-1844 inclusive, from a carefully prepared chart in the British Museum, which has every indication of being trustworthy. Two further explanations are necessary about this series. First, it gives the prices of "best" coal in the London market. Obviously the best coal did not bear the same name throughout the whole period. For example, Eden's Main, a Sunderland coal, was one of the highest-priced in 1807 but one of the lowest by 1830. Its quality had obviously deteriorated in the meantime, and no useful purpose would be served by charting the course of its price. Consequently the procedure followed was to take the highest-priced coal at every point of time. Fur-

<sup>1</sup> N. J. Silberling, "British Prices and Business Cycles, 1779-1850," *Review of Economic Statistics*, Supplement, October 1923.

<sup>2</sup> W. L. Thorp, *Business Annals* (1926).

<sup>3</sup> *Report . . . of the Coal Trade*, 1829, Appendix 7; *Report . . . of the Coal Trade*, 1836, p. 65; *Report . . . on the Coal Trade (Port of London) Bill*, 1838, p. 76.

<sup>4</sup> Robert Anderson, *A Brief Exposition of the Present State of the Coal Trade* (1839).

ther justification for this method is provided by the fact that it was the highest-priced coal which was always used by the Limitation in its calculations. From 1807 to about 1820, the highest-priced coal was usually one of the Newcastle Wallsend varieties; from 1820 it was almost without exception Stewart's Wallsend, a Sunderland coal. Accordingly, from 1823 to 1837 inclusive the series is a true price series for Stewart's Wallsend. After 1837, the quality is described as "best Sunderland coal," and may well have been Stewart's Wallsend in the great majority of cases.

Second, it should be noted that the price used is only one quotation for each month; that is to say, it is not a monthly average, which would of course be preferable, but which cannot be obtained. In almost every case the quotation is for the first market day of the month in question; though in the period for which the series relates solely to Stewart's Wallsend, it is for the first quotation of the month. There may have been some few months when no Stewart's Wallsend came to market on the first day.

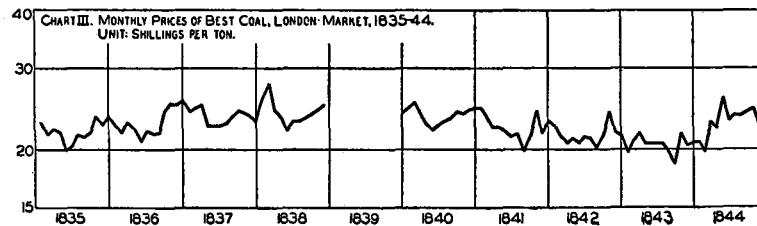
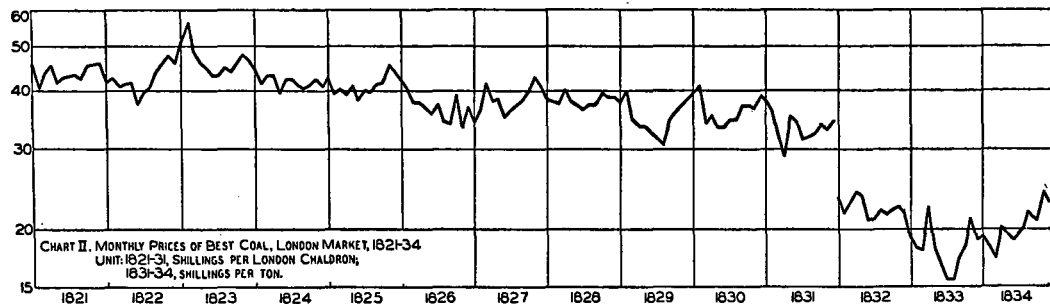
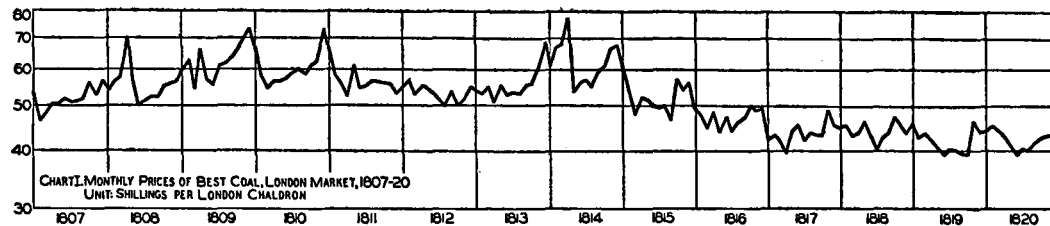
Finally, through 1831 the prices are per London chaldron and thereafter per ton. This is explained more fully in connection with Chart IV below.

These are, of course, limitations on the accuracy of the series in question; but on the whole they are not very important. It is for the period a very good and continuous record. The series for the whole period of thirty-eight years is presented in Charts I, II, and III, plotted on a log scale to facilitate comparison of fluctuations at different levels.

The story told by these charts can be set out quite briefly. As we already know, the regulation was off in all or part of the years 1812, 1824, 1826, 1829, 1833, and 1834. Some evidence also exists that there was open trade in 1814 and 1821, though it is of such a nature that we cannot be sure what significance to attach to it. Let us take the first group first, treating the various years separately.

1812. Prices in 1812 were lower than in either the preceding or succeeding year, and the seasonal fluctuation which at that time was well marked if somewhat irregular seems to have been much damped down. Open trade started at the beginning of the year; when the regulation was reimposed is not recorded. General prices in 1812 — it is understood that "general prices" means "general prices according to Silberling's index" — were somewhat higher than in 1811, though considerably lower than in 1813. Not much significance should be attached to this comparison in the examination of the monthly figures, since what we are interested in at the moment is the behavior of the coal prices themselves. No one examining the chart can fail to be impressed with the fact that 1812 was an exceptional year.

1824. The extra tax of 3s. 4d. per chaldron on coal imported into London was abolished in April 1824, making the duty equal at 6s. for



London and other coastal ports.<sup>5</sup> This reduction was reflected in a 3s. 6d. fall in price as between April and May. Open trade made itself felt in August. Thereafter price tended downward with very small fluctuations until July 1825. This suggests that regulation was not restored until the middle of 1825, though we cannot be sure that this downward movement was not due to the gradual working out of the full effects of the tax reduction. The sharp rise in general prices in 1825, finding no counterpart in coal prices, even indicates the possibility that both forces were at work.

1826. The limits of open trade are not recorded. The rather sharp downward trend for the year suggests the possibility that the limits were the beginning and end of the year; but it should be remembered that 1826 was a year of sharp recession in general prices. The seasonal does not follow the more usual pattern. Thus 1826 is another year on the chart that hits the eye.

1829. The regulation went off late in January and was reimposed the last day in August, but we should not expect the effects to show in London until March and October. Actually, March does show a large decline over February; but prices started up in September, August being the low point. Perhaps effective control was established before the agreement was formally put into effect. At any rate, the difference in the level of prices during the regulated and the non-regulated parts of the year is very striking. No conclusions are possible as to the effect on seasonal fluctuation.

1833-1834. These two years should be treated together as forming parts of one continuous unregulated trade. The agreement lapsed early enough in December 1832 for the effect to be felt in London in January. Regulation was reimposed on March 1, 1834, and a sharp rise followed in April. Except for two months, this fourteen-month period exhibits a remarkable depression of prices, unassociated with any similar movements of general prices, which changed very little during this time. The high price in April 1833 is unaccounted for, and may be due to a purely accidental failure of ships to arrive. On the other hand, the substantial increase in the summer of 1833 may best be explained by the temporary success of a partial price agreement.<sup>6</sup>

Let us now turn to the two years 1814 and 1821. As to 1814, aside from the uncertainty as to whether an open trade did exist and for how long, it was such an exceptional year that nothing much can be concluded from it. Evidence before the Committee of 1838 indicates that sometime early in the year ice on the Thames so interfered with shipping that prices for a brief period were as high as 100s. per London chaldron,<sup>7</sup> though obviously such extreme conditions did not exist on

<sup>5</sup> See above, pp. 49-50.

<sup>6</sup> See above, p. 104.

<sup>7</sup> *Report . . . on the Coal Trade (Port of London) Bill*, p. 97.

the first market day of any month. Second, 1814 was the last full year of war and the high point of general prices for the whole century 1750-1850. The drop in prices during the summer and early autumn might be due to open trade, but it is not safe to draw such a conclusion.

As to 1821, this year, while perhaps exhibiting a somewhat less marked seasonal variation than was usual at the time, appears to be fairly normal both as to the movements of coal prices and the relation of the latter to general prices. The conclusion seems warranted that if an open trade did exist in 1821, it cannot have been of long duration.

One more point emerges from these charts of monthly price data, namely, the relative stability of prices — disregarding trend — during the period 1834-1843 inclusive. It is not unreasonable to attribute this fact to the working of the Factors' Regulations which were in force for the whole period.

In summing up this review of monthly price movements, one fact is clearly indicated. The short-run effect of the Limitation was to keep prices above what they would have been had it not been in existence. Unfortunately, material does not exist — or if it does, it has yet to be unearthed — on which one might attempt to assess the long-run effect. Such an attempt would involve extending the series for at least ten years beyond 1845 and comparing the relation to other data both before and after the breakdown of the Limitation. Even then, conditions had changed so much by 1850 or so that it is doubtful whether the results would have much validity.

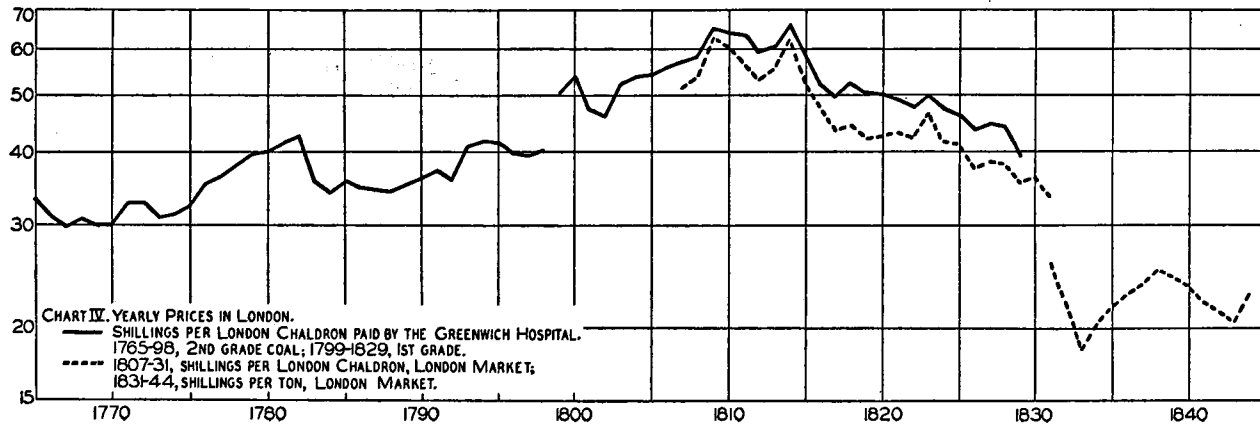
## 2. PRICES AND QUANTITIES

The next problem is to analyze together price and quantity series with a view to discovering what, if any, relationships can be established and in what way the Limitation manifested itself. For this purpose we make use of three series which we must now describe.

Chart IV shows annual prices from 1765 through 1844. From 1765 through 1798 the prices are for second-grade coal delivered into the cellar of the Greenwich Hospital in London. They are data collected for the Price History Study under the direction of Sir William Beveridge. The prices are calculated per "bare" London chaldron, that is without "ingrain," which means that they are approximately 5 per cent less than they would be had they been calculated per full chaldron. The Price History series are made up on the basis of "harvest years"; the year 1800, for example, means the twelve-month period from the harvest of 1800 to the harvest of 1801. This procedure is obviously convenient for some purposes, particularly when it is a question of getting significant series of food prices. But it is not at all convenient for our purposes, inasmuch as all the other relevant statistics are reckoned on a calendar-year basis. Fortunately it is very easy to make the necessary



CHART IV



correction in the case of the coal price series. The Greenwich Hospital made its purchases of coal, usually consisting of three or four cargoes yearly, almost without exception in the spring or summer when prices were thought to be at or near their minimum. Consequently the prices quoted by the Price History for the harvest year 1800 are in reality the prices paid for coal bought in the calendar year 1801. We have simply, then, to make this change systematically in order to reduce the Price History data from a harvest-year to a calendar-year basis and thus render them comparable with other price and quantity data. How well justified this move is in practice will be demonstrated in a moment when we come to the question of the reliability of the Price History series.

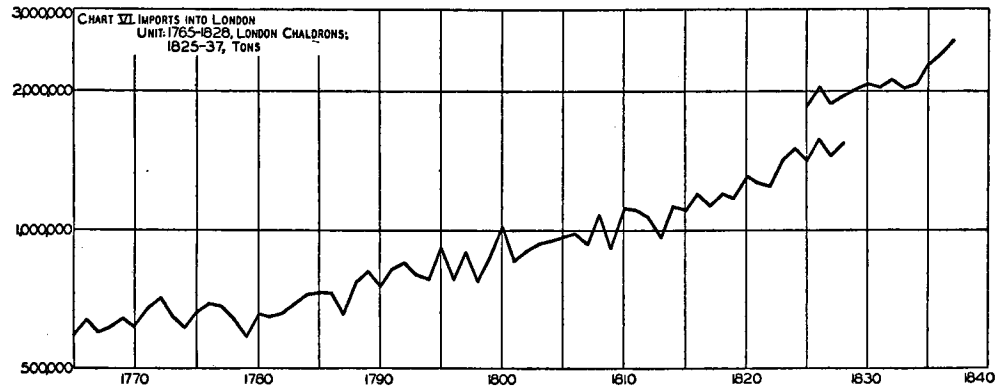
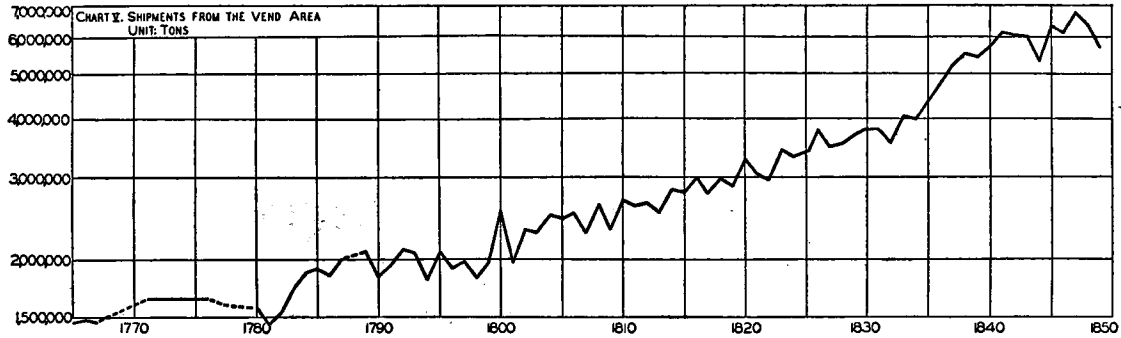
From 1799 through 1829 the solid line is a continuation of the previous series, only now the quality changes from second to first grade. There is no way of linking the two series together, but it may be inferred from a few quotations of second-grade coal in the early 1800's that the difference in price between the two was three to four shillings. If this is so, we may conclude that the price of second grade increased sharply (by from six to seven shillings) in 1799 over 1798. This, however, is not indicated on the chart.

The dashed line from 1807 through 1831 shows the arithmetic average of the monthly prices used in the preceding charts. These are per London chaldron with ingrain as sold on board ship in the London market. The rather remarkable conformity of this series and that showing the Greenwich Hospital prices for the same years, even though the latter are based on a much less satisfactory sample of quotations, gives us confidence in the Price History data for earlier years, and also completely justifies the procedure used in transforming from harvest to calendar years.

Finally, the dashed line from 1832 through 1844 is a continuation of the last series described, the only difference being that the prices are per ton, following the legal change from measure to weight at the beginning of 1832. The price for 1831 has been recalculated on a ton basis at the rate of 27 cwt. per chaldron in order to give continuity to the two series; but it would be hardly justifiable to recalculate either of the series *in toto*. This is because the London chaldron was a unit of measure and 27 cwt. is only an approximate equivalent in weight which may at times have been considerably wide of the mark.

Chart V shows quantities shipped out of what is called the "vend area." The latter includes the Tyne and the Wear from 1765 to 1828; Stockton comes in in the latter year, and Seaham is included after its completion in 1831. Hartley and Blyth are not included at any time because figures are lacking, but it is certain that their omission is not a serious matter.

# CHARTS V-VI



From 1765 through 1799 the figures are those collected by Ashton and Sykes.<sup>8</sup> They have been converted from Newcastle chaldrons to tons at the official rate of 53 cwt. This is a perfectly legitimate operation because the Newcastle chaldron, unlike the London chaldron, was always a unit of weight, and at this period its relation to the ton was legally established. The figure for 1800 is taken from Dunn's *View of the Coal Trade*,<sup>9</sup> in preference to the figure given by Ashton and Sykes, since the latter seems to be fantastically high. From 1801 through 1849 the figures are taken from Porter's *Progress of the Nation*.<sup>10</sup> As indicated earlier, Porter's figures have been checked against various other sources for test years and found entirely reliable. One exception should be noted; namely, the fact that for a period of about five years around 1830 Stockton is represented by tonnage figures from the accounts of the Stockton and Darlington Railroad already cited, to make up for certain gaps in Porter's series. It should be observed that up to 1780, the series does not show annual fluctuations, several years being missing (indicated by a dashed line on the chart), while the straight line from 1771 through 1776 indicates that the figure is an average for the six-year period.

Chart VI shows quantities imported into London, of which substantially the whole amounts came from the vend area. From 1765 through 1800 the figures are London chaldrons, taken from Ashton and Sykes. They have been checked against other sources. From 1801 through 1828 the figures are also London chaldrons and are taken from an article in the *Newcastle Journal* for January 17, 1829. They agree perfectly with those given in the evidence before the Lords' Committee of 1829. The upper series, beginning in 1825, is taken from the "Report of Committee E," 1871,<sup>11</sup> and checks with official figures put in evidence before the Committee of 1836. It does not correspond precisely with the lower series for the years 1825-6-7-8 if the latter is converted into tons or the former into chaldrons; but, as can be easily seen, the direction and magnitude of change are in each case so nearly the same that any large error is out of the question.

All these charts, like the previous ones, are plotted on the same log scale to facilitate comparison of fluctuations as between different levels and different units. Chart VII shows Silberling's general price index, also plotted on the same log scale.

If we now examine these charts for long-time trends, we find nothing which could not have been reasonably expected. It is obvious at a glance that the Limitation did not significantly distort the trend picture.

<sup>8</sup> Ashton and Sykes, *The Coal Industry*, p. 250.

<sup>9</sup> Page 72.

<sup>10</sup> Third edition, Section II, chap. vi.

<sup>11</sup> Page 43.

It is still, of course, conceivable that the absolute height of either the quantity or price series, or both, might have been different had there been no regulation; but, as has already been pointed out, this cannot be put to any test and is therefore a mere speculation.

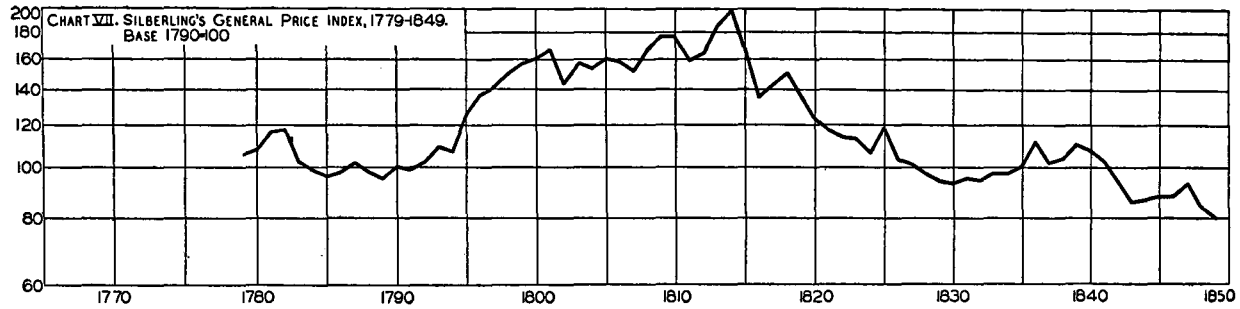
The trend of the coal price series parallels very closely that of Silberling's general price index. The trends of the two quantity series, on the other hand, are steadily upward and generally speaking at an increasing rate. The rate of increase, particularly in total shipments from the vend area, appears to turn significantly upwards around 1830. This is, of course, accounted for by the development of the foreign trade, which, according to Taylor, first became really important about 1828 and which was much increased by the reduction in export duties in 1832.<sup>12</sup> Those who would have us believe that the rate of relative expansion in British trade and industry began to increase with the so-called industrial revolution of the eighteenth century will derive small comfort from the statistics of this branch of the coal industry.

Turning to the question of the cyclical behavior of the series under consideration, it must be admitted that not very much of a positive nature emerges. The writer is not enough of a student of business cycles to be able to say anything of much weight on this subject and will have to be content with setting down a few impressions. It appears that there is only one case of what is clearly a cycle, in the modern sense of the word, indicated in all the materials consulted. That is the period lasting from the late twenties into the early forties. Depression and stagnation is followed by revival around 1834; then follows a period of extraordinary prosperity which gives way to recession around 1838. This in turn deepens into depression to be followed by revival again in 1844. Except for differences on the timing of turning points, this pattern emerges clearly in the coal price and quantity series, in Silberling's general index, and in the informative data of Thorp's *Business Annals*. Furthermore, a certain ambiguity about the turning points in the coal series is easily explained by the legislation of 1831-32, the strikes of the same years, the open trade of 1833-34, and again the strike of 1844. It would indeed be surprising if these events did not impress a certain individuality upon the behavior of the coal price and quantity statistics.

But before this cycle set in, no such agreement of sources can be cited; furthermore, to a more or less superficial observer, it seems at least doubtful whether any cyclical pattern can be discerned in any of the sets of data considered separately. This is, of course, not to deny the existence of ups and downs, of good years and bad years. The various coal series show them in great abundance, but certainly not in any regular sequence. Some of them appear to jibe well with general

<sup>12</sup> Taylor, *Observations*, p. 51.

CHART VII



price movements and the indications of Thorp's material, but others just as clearly do not. As an example of the latter, consider the years 1796 through 1801. Silberling's index shows a steady rise in general prices. Thorp reports one year of prosperity (1796) and all the rest depression; while the movement of coal prices and quantities was downward through 1798, then sharply upward, reaching record heights in 1800 and slumping off in 1801.

One is tempted to infer from indications of this sort that the economic system of England in the late eighteenth and early nineteenth century was undergoing a transformation which might be described as "ligamenization," if I may be allowed to coin a word. This process, traceable to powerful forces inherent in the capitalist system, gradually made a mutually interdependent whole out of relatively independent parts. It was only when it had proceeded a certain distance that the business cycle in the modern sense of the word, though all its elements may have been present before, could emerge. This stage, it may be suggested, was reached in the 1820's.<sup>13</sup>

What do the series before us suggest as to the effects of the Limitation in relation to specific fluctuations?

Let us first recall what we know about the Limitation prior to 1800. It was put on foot in 1771, probably going into effect a year or two later; it lapsed sometimes early in the eighties; it was reimposed about 1786, and thereafter continued in existence, with one interval of several months, until 1800. In view of this, the course of the price and quantity series is interesting. From 1773 prices rose continuously until 1782, quantities, with the exception of one downward dip, remaining substantially constant. Prices broke after 1782 and moved downward to 1788; at the same time quantities moved sharply upward, slacking off in pace in 1786. This clearly suggests that the influence of the regulation was of the first importance, and it is particularly significant as coming at a time when the obliterating tendencies of the trend forces were not pronounced. From 1786 on, the tendency of both price and quantity was upwards.

It is perhaps legitimate to infer from the fact that price went up most in this last period, imports to London next, and shipments from the vend area least, that more coal was being diverted to the London market from other markets where the increase in price was not so marked.

Let us now take the other years of known open trade and examine them for price and quantity movements.

<sup>13</sup> It is interesting to note that Marx held a view very similar to that expressed above. In the Preface to the second edition of *Capital*, he refers to the decade 1820-1830 in the following terms: "Modern industry itself was only just emerging from the age of childhood, as is shown by the fact that with the crisis of 1825 it for the first time opens the periodic cycle of its modern life" (*Capital*, Kerr ed., I, 18).

1812. Price down, shipments from the north up slightly, imports into London down. Here we may assume that the lower price in London discouraged shipments to the metropolis and thereby prevented the price from falling so low as it otherwise would have. On the other hand, the non-existence of the regulation accounts for higher total production. On the whole, this is what one would expect to be the *normal* pattern in open trades.

1824. Price down, total shipments down, imports into London up. As to quantities, this is the reverse of the expected pattern. It is easily accounted for, however, by the reduction in tax on imports to London which took place in 1824. The expected pattern reasserts itself in 1825, strengthening the presumption that open trade lasted into the latter year.

1826. Price down, total shipments up, imports into London up. This could be best accounted for on the hypothesis that prices did not fall so much in London as elsewhere. Unfortunately it cannot be checked.

1829. Price down, total shipments up, imports into London up. The same applies here as in the case of 1826.

1833-34. We shall disregard 1834 since only two months were unregulated. Price sharply down, total shipments sharply up, imports into London down. Fortunately we know something more of 1833, namely that it witnessed a large net depletion of stocks held on board ship in London. That is to say, the total quantity of coal *delivered* from ships was more than 90,000 tons greater than total imports; whereas in every other year from 1830 through 1837 the balance was the other way.<sup>14</sup> The result is that actual consumption of coal was greater than in any of the three preceding years or the next succeeding year. The low price obviously acted as a deterrent to new supply and as a stimulant to demand. At the same time the absence of regulations stimulated production and the search for new markets.

The year 1833, then, follows our expectations perfectly. It may perhaps be regarded as the type year of open trade which other years would have approximated in the absence of disturbing forces.

<sup>14</sup> Figures put in evidence by James Bentley before the Committees of 1836 and 1838 (*Report . . . of the Coal Trade*, 1836, pp. 99-100; *Report . . . on the Coal Trade (Port of London) Bill*, 1838, pp. 76-78).



## APPENDIX B

### THE AGREEMENT AMONG THE TYNE COAL OWNERS, 1835<sup>1</sup>

ARTICLES of agreement made this      day of      1835, between the several persons whose names are subscribed, being owners or lessees of certain collieries within the counties of Northumberland and Durham.

*1st.* The owners or lessees of each of the undermentioned collieries will by a written document appoint a representative, with full powers to act for such colliery, and to bind the owner or owners during the continuance of this agreement.

*2nd.* That the representatives shall have such an acquaintance with the general management of the concerns, and the money transactions of the colliery he represents, as to be able at all times to state correctly the quantity of coals sold, and the price actually received for the chaldron or ton, of both round coals and small, and shall be responsible for any irregular allowance or other deduction from the price at which his coals ought to be sold, or for any other violation of either the letter or spirit of this agreement.

*3rd.* That the owners or lessees shall have the power of changing their representative, upon giving notice in writing to the chairman.

*4th.* That a committee for the Tyne, consisting of nine members (selected from the representatives), shall be appointed by lists to be sent from each colliery, to act for one year, subject to re-election at the end of every 12 months; but though it is desirable that the committee should consist of the number above stated, for the purpose of settling the basis for the respective ports and collieries, the committee shall nevertheless be competent to form among themselves a sub or execute one for the purpose of carrying the provisions of this agreement into effect, so that such committee shall not consist of less than three for the Tyne.

*5th.* That five constitute a quorum, that the votes be taken by ballot, and that the decision of the majority shall bind the parties to this agreement in all cases, except when an appeal is allowed.

*6th.* That the parties to this agreement will adopt the existing basis for the collieries, whose quantities are now fixed, till such quantity shall have been objected to by the committee or the representatives, and finally settled by the referees, and in settling the quantity to be allowed to any colliery, the committee or referees to be guided by the powers of working and leading, proportion of the different sorts of coal, their

<sup>1</sup> Put in evidence by Brandling before the Committee of 1836. *Report . . . of the Coal Trade*, 1836, pp. 7-9.

respective selling prices and facilities of shipment. But that in estimating the powers of the respective collieries for the purpose of fixing the basis, such portions of their respective powers as are applied to the producing of coals sold, foreign or land-sale, shall not be taken into the account.

*7th.* That impartial reference shall continue to be the great leading principle on which the arrangements of the trade must be governed, and that it must be applied to settle the quantities between the different ports or rivers, forming parties to this agreement, as well as between individual collieries.

*8th.* That before an appeal be entertained from a river or district, a majority of the representatives of the collieries of such rivers or districts must have declared their conviction of the propriety of it, and have made such request in writing to the united committee.

*9th.* That the dissatisfied river or district shall name their referee, and that the united committee shall do the same, and that these two gentlemen shall name a third as umpire, previous to their entering upon the inquiry.

*10th.* That the whole expense shall be equally divided between the appealing part and the trade at large.

*11th.* That the referees shall have the power to reduce or to augment the quantity of such appealing river or district, and such decision shall be final.

*12th.* That the above principles which are to guide the reference in the case of rivers or districts, shall be applied to individual collieries appealing from the decision of the respective committees in the district to which they belong, except that it shall not be necessary for any individual colliery to obtain leave of the committee of the river to which it belongs, to make an appeal from their decision.

*13th.* That as soon as this agreement shall be signed, the rivers and districts shall be at liberty to appeal to the present united committee, but in case no appeal is made previous to the commencement of 1836, that then no change of basis as between the rivers or districts shall take place, except at the commencement of each year, and then only in case the river or district shall have given four months' notice to the then existing united committee of their intention to make such appeal.

*14th.* That in the case of individual collieries, they shall be at liberty to appeal also as soon as the agreement shall have been signed; but in case no appeal is made previous to the commencement of 1836, then no change of basis shall be made except at the termination of any six months, and then only on the representative of any colliery giving three months' notice previous to the 1st day of January and the 1st day

of July in any year to the respective committees of his intention to make such appeal.

*15th.* That the decision of the referees shall take effect in the case of rivers or districts from the commencement of the year, in the case of individual collieries from the commencement of the six months succeeding the period when he shall have given such notice.

*16th.* That the committee or referees shall have power to summon the parties to this agreement, or their agents, to answer any interrogatories, and to produce any documents necessary to enable them to give full effect to this agreement, but such power not to justify calling for the private accounts of the colliery.

*17th.* That the parties so summoned shall, for non-attendance or refusal to answer or produce such documents, forfeit 20*l.* to be returned only in cases where an appeal to a general meeting of representatives the majority shall decide in favor of the party appealing, the committee at such meeting not to vote on the appeal against their decision; the votes at such meeting to be taken by ballot.

*18th.* That the relative prices of every description of coal be fixed by the committee and the representatives of each colliery, subject to an appeal to referees.

*19th.* That no colliery, without leave of the committee, shall vary the fixed price agreed upon between such colliery and the committee, as the selling price of that colliery, under a penalty of 5*s.* for every chaldron so sold, subject to an appeal to referees in case of dispute.

*20th.* The committee in concert with the committee of the Wear and Tees, and the other parties to this agreement, shall make such issues of round coal from time to time, as may be necessary to meet the demand.

*21st.* Any colliery where particular difficulties of shipment may be reasonably apprehended at particular seasons of the year, or other causes, may be allowed such quantity, from time to time, in anticipation thereof, as the committee shall deem proper; any colliery thinking itself aggrieved by the refusal of such leave, the claim to be decided by reference.

*22nd.* All coal to be sold by weight, either by the ton of 20 cwt. or the chaldron of 53 cwt.; any colliery found by the inspector giving overweight to be fined 2*s.* 6*d.* for each and every cwt. of excess on an average of 10 waggons; every colliery to have a weighing machine, in proper order, in a convenient situation, under a penalty of 20*l.*

*23rd.* Any colliery exceeding the issue beyond 100 chaldrons, or 2 per cent, upon the basis, to finish a ship, shall forfeit for every chaldron so exceeding 5*s.*, and such excess shall also be deducted from the issue to the colliery for the next month.

*24th.* That each party shall deposit, in the hands of trustees, a

promissory note, payable on demand, to the amount of 20*l.* per 1,000 on its respective basis, as a security for the payment of fines and the general performance of this agreement, the committee to fix the amount of fines in every case not specially provided for; the trustees to consist of the chairman and the committee.

*25th.* That the inspectors of the Tyne, Wear, and Tees, shall, as often as the committee of either river may deem it expedient, examine together the measure of all the collieries of the different ports comprehended under this agreement, that the weight per chaldron may be kept moderate and uniform, as provided in rule 22*d.*

*26th.* No freighting or upholding freights or prices to be permitted without permission from the committee of the river or district in which the respective collieries are situated under a penalty of 5*s.* per chaldron on the quantity of coals so vended, subject to reference.

*27th.* That all parties to this agreement shall strictly adhere to such regulations as to the sale of coals in London by the coal-factors as the united committees shall from time to time agree upon.

*28th.* That if, at any time, during the continuance of this agreement, the united committees shall deem it expedient, for any temporary purpose, to grant an additional issue of coals to the markets upon the coast, they shall have power to do so under such modifications and upon such terms as they may consider expedient.

*29th.* That it be imperative on the committee to enforce the penalties incurred under this agreement, and collect the same once a month, and pay the same to the Newcastle secretary for the general purposes of the trade.

*30th.* This agreement to commence on the 30th day of January 1836, and to continue from year to year, during the pleasure of the parties hereto, any of whom may withdraw, on giving six months' notice, in writing, to the united committee, previous to the end of any year after the first year, and thus terminate this agreement.

*31st.* If circumstances should arise to render it expedient that this agreement should terminate otherwise than before provided for, and that, at a meeting of the representatives of the three rivers, and the other parties to this agreement, called for that purpose, four-fifths of the parties hereto shall so think it expedient, then this agreement shall terminate.

*32d.* No party to be bound by signing these rules until they shall have been agreed to and signed by the proprietors of every colliery upon the Tyne, and until the coal owners of the Wear, Seaham, Tees, Hartley, Cowpen, and Netherton, shall have signified their willingness to act in concert with the Tyne committee upon the general principles of this agreement.

33<sup>rd</sup>. That in case any difference of opinion should arise between the respective committees; or any individual coal owner and the committee of the district to which he belongs, upon the construction of any of the above articles, or upon any other point not herein provided for, that the same shall be submitted to reference.

## APPENDIX C

### THE AGREEMENT OF 1627<sup>1</sup>

[19 Feb., 1626-27.]

*Orders for the vent and sale of our Cooles (that ar Ostmen of Newcastle).*

1. first yt is ordered, that all and every ostman of Newcastle upon Tyne shall giue in a Certaine rate and proportion of Coles which he intendeth to utter and sell to be Laden aboard of any ship this yeare following vntill Christmas next, and that the same shalbe hearunder sett downe.

2. Item, that noe man shall offer to put to sale any coles but such as M<sup>r</sup>. Willm Hall, M<sup>r</sup>. Thomas Lyddell, M<sup>r</sup>. Henrie Chapman, M<sup>r</sup>. Robart Bewicke, M<sup>r</sup>. Robart Anderson, M<sup>r</sup>. Lyonell Maddison, M<sup>r</sup>. Raiphe Cole, and M<sup>r</sup>. Robart Shaftoe, or the greter part of them, shall thinke and repute to be marchantable at the prizes they ar offered to be sold for.

3. Item, that the said parties aboue named, shall one in every fourteen daies, vewe all mens pitts and staythes, and shall giue notice and signeife to any that shall offer to sell any Coles which they, or the greter part of them, shall thinke not fitt to be vented and sold, And that none shall offer to sell any Coles which they, or the greter part of them shall dislyke.

4. Item, that every Ostman of Newcastle shall make true entrie in the Kings Custom House and Towen Chamber of Newcastle of all Coles by him sold and Layd aboard of any ship and paie the duties for the same.

5. Item, that every Ostman of Newcastle shall weickly, upon the munday in the forenoone, give unto M<sup>r</sup>. Thomas Lyddell, M<sup>r</sup>. Robart Bewick, M<sup>r</sup>. Robart Anderson, and Thomas Crome, or to any thre or mor of them, a perfect note of all such Coles as he hayth sold and delivered in the weicke foregoing, and shall pay unto them, or some of them, Six pence of everie Chalder of Coles so sold and delivered.

6. Item, that the same money shall by them be paid into the hands of M<sup>r</sup>. Will<sup>m</sup> Hall, M<sup>r</sup>. Robart Bewick, and M<sup>r</sup>. John Clavering, to be by them kept in a Chist to the uses following in this present Order.

7. Item, that ther shalbe a general account made by them, or the greter part of them, that kepes the bookes of account, of every Oastmans deliuerie, according to such accompts as ar weickly giuen in; fower times in the yeare, vid<sup>t</sup>, At the last day of Aprill, the second day of Julij, the third day of September, and the Seuententh day of December, And if at any of these daies of accompt y<sup>t</sup> shalbe found that any

<sup>1</sup> *Records of the Company of Hostmen*, pp. 72-74.

Ostman hayth deliuered mor Colles then according to his proportion for his rate sett downe, Then ther shalbe deliuered forth of his money paid in by six pence upon a Chalder, sixtene penc upon everye Chalder to everyone that shall have deliuered fewer then according to his proportion of his rate sett downe, and which should haue been deliuered, And shalbe soe certified by them that kepes the bookes of accompte.

8. Item, at every accompt makinge, the remainder of the moneys shalbe paid unto them that haue paid in the same.

9. Item, Yt is ordered that if any default be in any man, that shalbe shorte in his delivery, ether because his coles are not redye upon his staythes, where they should have bene deliuered, or that his coles be reputed by the vewers abovenamed, or the greter part of us, to be not fytt to be vented to ships for the badness thereof, That parson soe shorte is not to haue paid unto him the sixtene pence of a chalder in this order aforemenconed for that proporcon which he shall soe want, and that the sixtene penc of a Chalder that should have bene due to him shall be and remaine to the use of the fellow-ship, And these are the rates which we haue given in. And to this order and the true performance therof we haue all subscribed our names.

10. Item, if any Hostman that should weicklye haue paid in six pence of everie Chalder of Coles shall not pay the same accordinglye, Then there shalbe, that weick followinge, an account made up of all the deliueries, but noe part of the monyes paid in by sixpenc upon a Chalder shalbe paid to him that shall ffaile in payment therof, And he to be reputed the sole Authore of the breach of this Order, And all other parsons shalbe paid ther monyes according to the Articles as aforesaide.

	<i>tens</i>		<i>tens</i>
Sir Peter Riddell, Gouvernor . . .	300	Mr. Charles Tempest . . . . .	200
Mr. Maior . . . . .	650	Mr. William Sherwood . . . . .	160
Sir Thomas Riddell . . . . .	600	Mr. Ra: Cole . . . . .	600
Sir William Selbye . . . . .	700	Mr. Thomas Metforthe . . . . .	150
Ladye Selbye . . . . .	150	Thomas Crome . . . . .	300
Sir Rob <sup>t</sup> . Hodgson . . . . .	550	Mr. Leo: Carr . . . . .	200
Mr. Nich <sup>s</sup> . Blaxton, pro him- selfe and father . . . . .	500	Mrs. Graye . . . . .	300
Sir Nicholas Tempest . . . . .	450	Mr. Hen: Lydell . . . . .	600
Sir Thomas Tempest . . . . .	800	Mr. Hen: Milborne and Jo: Hedworth children . . . . .	200
Mr. Henry Maddysonn . . . . .	800	Mr. James pro Strother Close . . . . .	300
Mr. Bewick and his sonn . . . . .	800	Mr. Raiphe Maddyson, Jo: Merleye . . . . .	300
Mr. William Hall . . . . .	650	Mr. Thomas Lyddell . . . . .	800
Mr. Jo: Claveringe . . . . .	500	Francis Bowes . . . . .	100
Mr. Rob <sup>t</sup> . Shaftoe ? . . . . .	500	Mr. Nicholas Cole . . . . .	100
Mr. Lyonell Maddyson . . . . .	500	Mr. Hen: Eden . . . . .	030
Mr. Henry Chapman . . . . .	500	Mr. Ja. Claveringe . . . . .	150
Mr. Robert Anderson . . . . .	400	Mrs. Bonner . . . . .	100*
Mr. Thomas Hall . . . . .	060		

\* The total is 14,000 tens, or about 294,000 tons.

## **BIBLIOGRAPHY**



## BIBLIOGRAPHY

TO ATTEMPT to list all the books, pamphlets, etc., dealing with the coal trade in the period 1600-1850 would be a work of super-erogation in view of the extensive bibliographies assembled by Nef and by Ashton and Sykes. This list, therefore, is restricted to works which have been of genuine assistance in the study of the Limitation and works which appear to have been either unavailable to or unnoticed by previous authors.

### MANUSCRIPT COLLECTIONS, ETC.

The most important collection of documents bearing on the subject of this study is that of the North of England Institute of Mining and Mechanical Engineers, which has only recently (1930) been housed in a fireproof vault and sorted out sufficiently to allow the material to be used. It is of the greatest interest to historians in many fields. This collection has not yet been adequately catalogued, but the following description, given by Mr. T. V. Simpson in a paper read at Newcastle in 1931<sup>1</sup> will indicate the scope of the material. He classifies the papers under nine headings:

1. The Minute Books of the London Lead Company, 1692-1895; 36 manuscript volumes and 4 volumes of maps. (This series is complete and must be one of the longest continuous company records in existence.)
2. William Brown's letter-books; 2 volumes covering 1749-55 and 1765.
3. Watson Collection of books and plans, 1745-1832; 150 manuscript volumes and over 700 plans.
4. Buddle Collection of books; 54 manuscript volumes.
5. Johnson Collection, 1774-1851; 12 manuscript volumes.
6. Easton Collection, 1790-1876; 17 manuscript volumes.
7. Unthank's letters and papers, 1760.
8. Bell Collection, 1650-1850; 22 volumes, mostly newspaper cuttings, handbills, etc. This collection appears to have been meant for a history of mining by a London printer.
9. Various odd manuscript volumes, maps, and plans.

I should also mention here the records in the possession of the Durham and Northumberland Coal-Owners' Association, of which the Minute Books of the Limitation of the Vend, 1826-1847, so extensively used in this study, are apparently the earliest. For purposes of identifying the meetings which gave rise to minutes cited, the following notation has been devised:

<sup>1</sup>"Old Mining Records and Plans," *Transactions of the Institution of Mining Engineers*, vol. LXXXI, Part 1, pp. 75-108.

CT = Meeting of the Tyne Committee

CTW = Meeting of the joint Tyne and Wear Committee

CTTW = Meeting of the joint Tyne, Tees, and Wear Committee

GT = General meeting of the Tyne owners.

GTW = General Meeting of the Tyne and Wear owners

GTTW = General meeting of the Tyne, Tees, and Wear owners

For further particulars see Chapter VIII, and especially footnote 5, page 58.

Through the courtesy of Sir William Beveridge, Chairman of the International Scientific Committee on Price History, I have been able to make use of certain unpublished data on coal prices in the eighteenth and early nineteenth centuries, which are soon to appear in the Committee's study of the history of English prices.

#### PARLIAMENTARY PAPERS

*Report from the Committee Appointed to Consider of the Coal Trade of this Kingdom, with Appendix including Minutes of Evidence, June 23, 1800* (Reports of Committees, House of Commons, 1785-1802, vol. X).

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