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## Early American Interest in Waterway Connections Between the East and the West

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Although the history of the St. Lawrence waterway project might suggest a different conclusion, it is a well-established fact that the American people have always been keenly interested in water transportation and have generally indicated a willingness to support at public expense navigation improvements which have national importance. Particularly was this true in the early history of the republic when railroads were unknown, roads were few in number and abominable in quality, and waterways provided the most satisfactory highways into the interior. The purpose of this paper is to suggest some of the reasons for the early emergence of American interest in the development of waterway connections between the Eastern Seaboard and the settlements west of the Appalachians and to indicate some of the actions that were taken looking toward the development of such connections.

First, however, it may be helpful to comment briefly on the physiography of the area under review, that is to say, the portion of the present-day United States lying east of the Mississippi River. The most prominent feature of this region is, of course, the Appalachian mountain range, 300 miles in width and 1,300 miles long, which extends from the Green Mountains of Vermont to the pine-hills of Alabama.<sup>1</sup> Although of comparatively low elevation, the Appalachians interposed

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<sup>1</sup> Caroline E. Macgill *et al.*, *History of Transportation in the United States before 1860* (Washington, 1917), 4.

a formidable barrier to the development of transportation into the interior.

The forests and the exceedingly dense undergrowth which covered the mountains increased the difficulty of passage, while the rivers of the eastern slope, since they were not navigable far back from the coast, afforded no ready access to the interior. These rivers, however, when followed to their headwaters, revealed occasional passes which were early discovered and used by explorers, fur traders, military expeditions, and would-be settlers. The easiest pathway to the West was by way of the Hudson and Mohawk rivers, which passed over a region gradually rising from near sea level to a maximum of some 578 feet.<sup>2</sup> In Pennsylvania the chief route to the Ohio Valley followed the West Branch of the Susquehanna. Farther south was another route by the Juniata to a tributary of the Allegheny. Virginians went up the valley of the Potomac and by a short portage to the Youghiogheny. Other routes lay up the James River and down the Great Valley to the Greenbrier and Kanawha, or by Cumberland Gap into Kentucky, where the famous Warrior's Path led to the Ohio.

The first prominent American to give serious attention to the problem of penetrating this mountain range and of linking the East with the West was George Washington, far-sighted and enterprising citizen of Virginia. First as a surveyor and as a member of the Ohio Company, organized in 1749 to promote colonization in the Ohio Valley, then as an officer during the French and Indian War, and later as an astute businessman interested in finding buyers for his extensive western lands, Washington came to feel keenly the need for improved transportation facilities between the eastern states and the settlements west of the Appalachians.<sup>3</sup> More important still, he indicated an eagerness to lend his support to any project calculated to bring about the desired improvement. Thus in 1770 he suggested that a scheme projected by certain citizens of Maryland to clear the channel

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<sup>2</sup> Albert L. Kohlmeier, *The Old Northwest*. . . (Bloomington, Indiana, 1938), 6.

<sup>3</sup> Washington to Thomas Lee, August, 1754, in John C. Fitzpatrick (ed.), *The Writings of George Washington* (39 vols., Washington, 1931), I, 100-101; Washington to Thomas Johnson, 1762, *ibid.*, II, 391; *House Reports of the Committees*, 19th Cong., 1st Sess., No 228, pp. 1-2; Corra Bacon-Foster, *Early Chapters in the Development of the Patomac Route to the West* (Washington, 1912), 13-21.

of the lower reaches of the Potomac be "recommended to Publick Notice upon a more enlarged Plan": that it make provision for an open channel to Fort Cumberland, with connection by portage to the headwaters of the Ohio. Such a waterway, he held, not only would solve many of the local transportation problems of Virginia and Maryland but would also become "the Channel of conveyance of the extensive and valuable trade of a rising Empire."<sup>4</sup>

When it became evident that the Maryland-sponsored project would not be undertaken, Washington attempted to persuade the Virginia House of Burgesses to appropriate funds for opening a public highway between the East and the West.<sup>5</sup> Failing in this endeavor, he introduced a bill to empower individuals to subscribe to the enterprise and to effect the improvement at their own expense. Even with this modification, the project was strongly opposed, particularly by spokesmen of the central portion of the colony. To allay the hostility of this populous region, an amendment providing for the improvement of navigation of the James River was added to the bill. So amended, the bill was enacted early in 1772.<sup>6</sup> Implementation of the act, however, was dependent upon the enactment of a similar law by Maryland. Governor Thomas Johnson exerted himself to obtain such a law but failed largely because of the opposition of the merchants of Baltimore who feared that improving the Potomac would divert traffic from their market to Georgetown.<sup>7</sup> Before this problem could be resolved, the Revolution started and all plans for undertaking the improvement were indefinitely postponed.

At the end of the war Washington turned with renewed eagerness to the promotion of his favorite project. In numerous conferences and letters with prominent men of his day the newly-retired commander-in-chief discussed various aspects of the problem of providing improved east-west

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<sup>4</sup> Washington to Thomas Johnson, July 20, 1770, *Writings of Washington*, III, 20.

<sup>5</sup> Washington to Thomas Jefferson, March 29, 1784, *ibid.*, XXVII, 374; John Pickell, *A New Chapter in the Early Life of Washington* (New York, 1856), 29.

<sup>6</sup> William W. Hening, *The Statutes at Large . . . of all the Laws of Virginia* (13 vols., Richmond, Virginia, 1821), VIII, 573; Washington to Jonathan Boucher, May 4, 1772, *Writings of Washington*, III, 81.

<sup>7</sup> Washington to Jefferson, March 29, 1784, *Writings of Washington*, XXVII, 373-377.

transportation. The character and substance of these discussions may be judged from an examination of letters exchanged between Jefferson and Washington in March, 1784.

This was the moment, Jefferson wrote, for uniting the commerce of the Youghiogheny and Cheat rivers with that of the Potomac. All the world was "becoming commercial." Were it practicable to keep the new American empire separated from other countries, "we might indulge ourselves in speculating whether commerce contributes to the happiness of mankind. But we cannot separate ourselves from them . . . . We must then in our own defence endeavor to share as large a portion as we can of this modern source of wealth and power." The Potomac, the Hudson, and the Mississippi were all possible routes, but the Ohio-Potomac, because it was the most direct, was potentially the best of the three. But if its natural advantages were to be fully realized, the channels of its rivers would have to be cleared and canals would have to be provided around the falls and rapids. He had been urging the Virginia legislature to create a special fund to finance these needed improvements, but he had met with the objection "that public undertakings are carelessly [*sic*] managed and much money spent to little purpose." If Washington would be willing to direct the state's navigation improvement activities, Jefferson wrote, this objection would be removed. But he did not wish to over-persuade. If the superintendence of the work would too much disturb his friend's "retirement and repose" he would say no more.<sup>8</sup>

Washington replied that he agreed with Jefferson on the advantages of the Ohio-Potomac communication "over *all* others." Furthermore, he was "satisfied that not a moment ought to be lost in recommencing this business." As soon as the British had surrendered the posts of Oswego and Niagara, "the Yorkers" would lose no time in improving the Hudson-Mohawk route. It behooved Virginia and Maryland to be equally energetic. Certainly it was in the interest of both colonies "to remove obstructions, and to invite the trade of the Western territory" into the channels of the Ohio-Potomac route. But Washington had serious misgivings as to whether the project could be carried out as a public enter-

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<sup>8</sup> Jefferson to Washington, March 15, 1784, in Julian P. Boyd (ed.), *The Papers of Thomas Jefferson* (12 vols., Princeton, 1953), VII, 25-27.

prise. Aside from the jealousies which prevailed and the difficulty of apportioning funds between the two colonies, there was "the impracticability of bringing the great, and truly wise policy of the measure" to the view of the people, and "the difficulty of drawing money from them, for such a purpose." Nevertheless, he was convinced that, considering "the immense advantages which this Country would derive from this measure," no effort should be spared to launch the enterprise. Concerning the proposal that he personally direct a state program of internal improvements, Washington stated in his letter that his decision would depend on a number of factors, including the size and nature of the program and whether or not acceptance of the position would interfere with any other plan he had in contemplation.<sup>9</sup>

Some six months after this exchange of views Washington made an extensive tour of the headwaters of the Ohio, talking with settlers and other persons acquainted with the transportation facilities between the East and the West and preparing careful maps and notes. Following his return, he sent off to Benjamin Harrison, Governor of Virginia, a letter that is generally regarded as a milestone in the development of American policy concerning transportation improvements.<sup>10</sup> In addition to outlining a plan for the co-operative development of the Potomac-Ohio route by Virginia and Maryland, through the medium of either public or private agencies, Washington developed at some length certain arguments stressing the need for improved east-west transportation, to which he had previously given only passing attention.

Improved transportation, Washington averred, would stimulate western agricultural and industrial production. In the absence of adequate transportation facilities, the backwoodsmen had no incitement to labor. "But smooth the road once, and make easy the way for them, and then see what an influx of articles will be poured upon us; how

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<sup>9</sup> Washington to Jefferson, March 29, 1784, *Writings of Washington*, XXVII, 373-377.

<sup>10</sup> For the letter, dated October 10, 1784, see *Writings of Washington*, XXVII, 471-480. For commentaries, see Pickell, *A New Chapter in the Early Life of Washington*, 37-38; Herbert B. Adams, "Washington's Interest in the Potomac Company," *Johns Hopkins University Studies in Historical and Political Science*, III, No. 1, 84-89; *House Reports of the Committees*, 19th Cong., 1st Sess., No. 228, pp. 2-4.

amazingly our exports will be increased by them, and how amply we shall be compensated for any trouble and expense we may encounter to effect it." More important still, better transportation would serve as a potent force in strengthening the bonds of union between the East and the West. The flanks and rear of the United States were the possessions of Spain and England. The western states stood, as it were, on a pivot. The touch of a feather might turn them any direction. Unless shorter and easier channels were opened to the Atlantic ports, the western settlers were likely to ship their surplus products down the Mississippi or out the St. Lawrence. What the political consequences would be needed not the gift of prophecy. The only real safeguard was to bind the westerners to the East by "the cement of interest," the strong chains of commerce.<sup>11</sup>

In advancing these broad, national considerations, Washington, it is reasonable to assume, was not unmindful of the benefits that he personally—as the owner of large tracts of land in the West and as a businessman interested in the fur trade—would derive from the opening of improved communication. Nor was he losing sight of the advantages that would accrue to his native state. In fact, in his letter to Harrison he refers to New York and Pennsylvania as "rival States" interested in developing their own transportation connections with the West and warns that if Virginia and Maryland are to obtain their proper share of the western commerce they dare not delay the development of the Ohio-Potomac route. Nevertheless, his emphasis on the political factors indicates that he was thinking not primarily as a Virginian but rather as a citizen of the new confederation of states.<sup>12</sup>

In other letters of 1784 Washington presented the viewpoint that national considerations might justify the opening of several east-west routes. "I am not for *discouraging* the exertion of any State to draw the commerce of the Western Country to its sea ports," he wrote to George Plater of Maryland. "The more communications are opened to it, the closer we bind that rising world (for indeed it may be so called) to our interests, and the greater strength shall we acquire by

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<sup>11</sup> *Writings of Washington*, XXVII, 475-476.

<sup>12</sup> Pickell, *A New Chapter in the Early Life of Washington*, 34; *House Reports of the Committees*, 19th Cong., 1st Sess., No. 228, p. 2.

it.”<sup>13</sup> To prevent the trade of the Western territory from settling in the hands either of the Spainards or of the British, it was most important, Washington insisted in a letter to Jacob Read of Pennsylvania, that the West be afforded adequate trade outlets through American territory. If connections were established between the Atlantic Coast and the Ohio Valley and other connections were developed between the Ohio River and Lake Erie, the beneficial results would exceed the highest expectations. “We shall not only draw the produce of the western Settlers, but the Fur and peltry trade of the lakes also, to our Ports. . . to the amazing encrease of our Exports, while we bind those people to us by a chain which never can be broken.”<sup>14</sup>

The letter to Harrison was brought before the legislature of Virginia, which in turn instructed the governor to send a delegation for discussions with the Maryland officials. This was promptly done, and the outcome was a report recommending the creation, by concurrent action of the Virginia and Maryland legislatures, of a private company to develop the route recommended by Washington.<sup>15</sup> Without delay the legislatures accepted the recommendations of the commissioners and enacted legislation authorizing the formation of the Potomac Company to build such canals and perform such other works as were deemed necessary for “opening, improving and extending” the navigation of the Potomac above tidewater to the Cheat or Monongahela, whichever the commissioners might find more convenient and beneficial to the western settlers.<sup>16</sup> In approximately four months sufficient funds had been pledged to enable the sponsors of the project to hold an organizational meeting,<sup>17</sup> at which time Washington was selected president. Shortly thereafter, laborers were recruited and actual construction was started. But the company’s good luck was not to continue. First the workers proved unruly; then high water

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<sup>13</sup> Letter dated October 25, 1784, *Writings of Washington*, XXVII, 483.

<sup>14</sup> November 3, 1784, *ibid.*, 488-489.

<sup>15</sup> For the report, see Pickell, *A New Chapter in the Early Life of Washington*, 44-46.

<sup>16</sup> Printed in *ibid.*, 47-62.

<sup>17</sup> Of the total capital that had been raised by 1808, \$97,778 was contributed by Maryland; \$31,111 by Virginia; and the remainder by private individuals. See *American State Papers, Miscellaneous* (Washington, 1834), I, 811.

impeded construction and unforeseen engineering difficulties developed; finally, and most serious of all, public interest in the project waned and some of the subscribers refused to pay their assessments.<sup>18</sup> Work on a limited scale was continued for years but was finally abandoned altogether. The undertaking had proved too formidable for the meager financial resources of the company.

The Potomac enterprise did, however, achieve the desirable result of interesting men of affairs in other states in the problem of transportation improvement. Thus the years 1791-1798 saw the formation of several private companies to develop transportation connections between east and west. Among the more important of these were: the Society for Promoting the Improvement of Roads and Inland Navigation, created by an act of the Pennsylvania legislature in 1791 to carry out a plan of development involving the improvement of water and land routes by way of the Delaware River to Lake Ontario and Lake Otsego, and of eight routes by the Susquehanna drainage, north, northwest, and west;<sup>19</sup> the Western Inland Lock Navigation Company, chartered by New York in 1792 to develop an all-water transportation route from Lake Ontario to the Hudson River by way of the Mohawk Valley;<sup>20</sup> and the Niagara Canal Company, created by the New York legislature in 1798 to construct a canal to link Lakes Erie and Ontario.<sup>21</sup>

Although both the Society for Promoting the Improvement of Roads and Inland Navigation and the Western Lock Company received some state financial assistance,<sup>22</sup> each succeeded in building only a few sections of its proposed canal. The other company accomplished nothing.<sup>23</sup> These unhappy experiences—which with minor variations were

<sup>18</sup> See Pickell, *A New Chapter in the Early Life of Washington*, 76-118; Bacon-Foster, *Early Chapters in the Development of the Potomac Route to the West*, 71-135.

<sup>19</sup> *American State Papers, Miscellaneous*, I, 834-860.

<sup>20</sup> *Laws of the State of New York . . . 1789-1796* (Albany, 1887), III, chap. 40.

<sup>21</sup> *Laws of the State of New York* (Albany, 1802), II, 328.

<sup>22</sup> Pennsylvania made generous contributions to the various canal companies sponsored by the Society. See *American State Papers, Miscellaneous* I, 731, 736, 829, 843-860. New York, in addition to purchasing stock to the value of \$92,000 in the Western Stock Company, made an outright gift of \$12,500. See Archer B. Hulbert, *The Great American Canals* (Cleveland, 1904), II, 42; this is Vol. XIV of the *Historic Highways of America* series.

<sup>23</sup> *American State Papers, Miscellaneous*, I, 735.

the experiences of dozens of other construction concerns of the day<sup>24</sup>—caused many Americans to conclude that private companies had neither the money nor the engineering skill needed to carry out major transportation projects. At the same time, the high tolls and the arbitrary actions of some of the turnpike companies aroused so much popular resentment that increasing numbers of public spirited citizens began wondering whether the construction and control of roads and canals were not matters of too much public interest to be left largely to private enterprise.<sup>25</sup> The cumulative result was the gradually increasing and widespread demand for a larger measure of governmental participation in the construction and maintenance of essential transportation facilities.

The first appeal was to the states. But as the history of the Potomac enterprise had conclusively demonstrated, the states were not eager to assume the responsibility.<sup>26</sup> They were willing to make grants to help finance important improvements, but they preferred that the bother and the principal expense of construction should rest with private enterprise. Their supply of ready capital was limited. Their credit standing was none too high, some of them having repudiated debts contracted in the revolutionary era. To attempt to raise money by increasing taxes was considered politically inexpedient. Action by the states was made still more difficult by the bitter sectional conflicts within the individual states. The divisions in Maryland and Virginia have already been noted. Those of New York and Pennsylvania were no less notorious.<sup>27</sup> It was the view of thoughtful persons of the day that a policy of state ownership would increase the sectional jealousies and conflicts.<sup>28</sup>

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<sup>24</sup> *Ibid.*, 725-736, 753, 764-765.

<sup>25</sup> See, for example, John B. McMaster, *A History of the People of the United States* (8 vols., New York, 1885), II, 554-556. But see also Carter Goodrich, "National Planning of Internal Improvements," *Political Science Quarterly*, LXIII (1948), 41-43.

<sup>26</sup> See Louis Hartz, *Economic Policy and Democratic Thought: Pennsylvania, 1776-1860* (Cambridge, 1948), 129-130, for a discussion of the reluctance of the government of Pennsylvania to undertake that state's canal construction program.

<sup>27</sup> The start of construction of a waterway across New York State was long delayed by a disagreement between those who believed the western terminus should be Lake Erie and those who favored Lake Ontario. See *Laws of the State of New York*, 29-32, 39-41, 50-53. For an able discussion of sectional conflicts within Pennsylvania see Hartz, *Economic Policy and Democratic Thought*, 9-14.

<sup>28</sup> See Hartz, *Economic Policy and Democratic Thought*, 130.

The remaining alternative was federal construction. For several reasons the federal government seemed the logical entity to undertake any needed improvements. It had competent army engineers; it had extensive sources of revenue; and it was in a better position than either the states or private companies to formulate and carry into effect an integrated system of internal improvements. But its qualifications were more apparent than real. The government had assumed a tremendous burden of debt; political and sectional strife were rife; and its leaders had yet to prove their ability to hold together the newly-created Union. Most important of all, the constitutional authority of the federal government to construct and maintain roads and canals was still widely challenged. Thus everything considered, the likelihood that the government at Washington would accept responsibility for promoting and financing internal improvements did not seem particularly bright.

For a time, that is to say until near the close of the nineteenth century, the settlers of the West indicated very little interest in the various schemes being attempted or proposed for linking the East with the West. Of course, they favored the improvement of transportation; but they did not view the matter as of urgent importance. Their numbers were few; their wants were insignificant; their surplus produce could generally be disposed of by floating it down the Ohio and Mississippi rivers to markets at New Orleans.<sup>29</sup> By the close of the first decade of the nineteenth century, however, the situation had radically changed. From a population of 387,183 in 1800 the states and territories of the West had grown by 1810 to 1,075,398. During the same period western New York, Pennsylvania, and Virginia had registered a comparable population increase.<sup>30</sup> As the lands of the West lost some of their frontier characteristics, the settlers not only began to demand more and a greater variety of manufactured goods but also began producing a larger volume of

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<sup>29</sup> On the use of the Mississippi route by the early settlers of the Ohio Valley, see Guy S. Callender, "The Early Transportation and Banking Enterprises of the States in Relation to the Growth of Corporations," *Quarterly Journal of Economics*, XVII (1903), 120-121; E. L. Bogart, *Internal Improvements and State Debt in Ohio* (New York, 1924), 6-7.

<sup>30</sup> See Callender, "The Early Transportation and Banking Enterprises of the States," 115-116.

goods for the export market.<sup>31</sup> The inevitable result was the production of more goods than could profitably be disposed of and a growing dissatisfaction with the existing transportation facilities. The New Orleans market was too small to take the quantity of goods now being shipped down the Mississippi. To store the produce in the warehouses at New Orleans to await shipment to the Atlantic Seaboard or to foreign ports was to run the risk of spoilage. Furthermore, the Ohio-Mississippi route was of little use to the settlers in the western areas of New York, Pennsylvania, Maryland, and Virginia, nor to the residents of northern Ohio and Indiana. Their goods had to go by other waterways or else move entirely by land, over turnpikes or primitive trails. Regardless of the route utilized, transportation costs were excessive. To haul a ton of freight from New York City to Buffalo cost about \$100; to move a ton from Philadelphia to Pittsburgh, an all-land route, cost \$125; for the country as a whole the average cost of shipping freight was \$10 per ton per 100 miles.<sup>32</sup> Articles which could not stand these rates were shut from market, and among these were some of the staple products of the western farmers, such as grain and flour, which could not bear transportation more than 150 miles.<sup>33</sup>

As Peter B. Porter, representative of western New York observed, "the want of a market" had now become the major problem of the western inhabitants. Nowhere could "the great staple articles for the use of civilized life be produced in greater abundance or with greater ease. And yet, as respects most of the luxuries and many of the conveniences of

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<sup>31</sup> England's demand for foodstuffs during the Napoleonic wars gave an extra impetus to the production of wheat in western New York, western Pennsylvania, and in the remote regions along the Ohio and the shores of Lake Erie. Macgill, *History of Transportation in the United States*, 132.

<sup>32</sup> *Ibid.*, 77-88; McMaster, *A History of the People of the United States*, III, 463-464. The cost of transportation from Buffalo to New York prior to 1825, "equalled nearly *three* times the market value of wheat in New York; *six* times the value of corn; *twelve* times the value of oats; and far exceeded the value of most kinds of cured provisions." Quoted by G. S. Callender, *Selections from the Economic History of the United States, 1765-1860* (New York, 1909), 327.

<sup>33</sup> As Turner has remarked, it was the high cost of transportation that helps to explain the attention which the interior first gave to making whiskey and raising livestock. The whiskey carried the crop in a small bulk with a high value, while the livestock could walk to market. Frederick Jackson Turner, *Rise of the New West* (New York, 1906), 101. See also Leland D. Baldwin, *Whiskey Rebels: the Story of a Frontier Uprising* (Pittsburgh, 1939).

life, the people are poor. They have no vent for their produce at home; because, being all agriculturists, they produce alike the same articles with the same facility; and such is the present difficulty and expense of transporting their produce to an Atlantic port, that little benefits are realized from that quarter. . . . Such is the fertility of their lands, that one half of their time spent in labor is sufficient to produce every article, which their farms are capable of yielding in sufficient quantities, for their own consumption, and there is nothing to incite them to produce more."<sup>34</sup>

Since markets were not to be had at home, increasing numbers of farmers in the states bordering on Canada turned to Quebec and Montreal for a market. For these farmers the St. Lawrence River, even with its rapids and time-consuming portages, offered the cheapest available transportation. Compared with the \$100 per ton cost of shipping goods from Buffalo to Albany, produce could be moved from Buffalo to Montreal for only \$30 and that, too, more speedily than by the all-American route. Under the circumstances, it is not surprising that, in spite of the half-hearted efforts of the government at Washington to end such traffic, every year hundreds of thousands of dollars' worth of lumber, grain, flour, and potash were shipped down the St. Lawrence. By 1812 "one half of the fur trade of the Northwest, all the produce of Vermont as far south as Middlebury, and of every county of northern New York from Essex and Clinton on Lake Champlain to Niagara on the Niagara River, was gathered at Montreal."<sup>35</sup> The superiority of the St. Lawrence route, combined with the preferences granted by British trade regulations, was more powerful than all the laws and regulations emanating from Washington.

The practice, however, was potentially perilous. One danger was that the western inhabitants would begin by shipping their produce out the St. Lawrence and then decide to throw in their political lot with the country controlling the mouth of their water route. Another was that the westerners—because of annoyance or exasperation at the failure of Congress to provide for their transportation needs—would

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<sup>34</sup> *Annals of Congress*, 11th Cong., 2d Sess., p. 1388.

<sup>35</sup> McMaster, *History of the People of the United States*, III, 464-465. See also Harold A. Innis and A. R. M. Lower, *Select Documents in Canadian Economic History 1783-1885* (Toronto, 1933), 224-229; *Annals of Congress*, 14th Cong., 2d Sess., p. 909.

decide to secede from the Union and establish an independent nation. That these dangers were very real was revealed in Aaron Burr's success in playing upon western discontentment,<sup>36</sup> northeastern New York's defiance of the American Embargo Act of 1807,<sup>37</sup> and Vermont's forty-year commercial and political flirtation with Great Britain.<sup>38</sup> In truth, the time had come when the geographical sections of the country would have to be united, if they were to be united at all, "by something stronger than the Constitution."<sup>39</sup> If the government at Washington and the country as a whole continued to ignore the legitimate demands of the frontier settlers for an outlet to the Atlantic, there was, as Porter reminded the House, "great reason to fear that our Western brethren may soon accost us in a tone higher than that of the Constitution itself."<sup>40</sup> What might happen, he warned, could be deduced from the recent disturbances in Pennsylvania and Massachusetts. If the affections of the western people were to be attached to the Union, they would have to be attached by their own interests.

Fortunately, by the early 1800's the federal government was in a much more favorable position to undertake transportation improvements than it had been a decade earlier. It had acquired greater strength and stability; it was rapidly liquidating the national debt; and for some time the treasury ledger had shown an annual surplus. Private interests—which at a later date were oftentimes opposed to federal planning or control of development projects—did not wish at this time to monopolize the construction field but eagerly sought governmental appropriations and/or governmental subscriptions to the stock of their companies.<sup>41</sup> The party in power, the Republican, had gained new political strength through the admission of Vermont, Kentucky, Tennessee, and Ohio into the Union. More important still, the earlier widespread opposition on constitutional grounds to federal spon-

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<sup>36</sup> Henry Adams, *History of the United States of America* (9 vols., New York, 1931), III, chaps. 10-14; Thomas P. Abernethy, *The Burr Conspiracy* (New York, 1954).

<sup>37</sup> McMaster, *History of the People of the United States*, III, 296-297, 304-305.

<sup>38</sup> *Ibid.*, 294; Donald G. Creighton, *The Commercial Empire of the St. Lawrence* (Toronto, 1937), 103-104.

<sup>39</sup> McMaster, *History of the People of the United States*, III, 465.

<sup>40</sup> *Annals of Congress*, 11th Cong., 2d Sess., p. 1400.

<sup>41</sup> Goodrich, "National Planning of Internal Improvements," 39.

sorship of internal improvements appeared to be subsiding, and the federal authorities, possibly as a consequence, seemed more inclined to sponsor transportation-development programs.

One of the first indications of this new federal concern with internal improvements was the inclusion in the Ohio Enabling Act of 1802 of a provision obligating Congress to set aside 5 per cent of the proceeds of the public lands sold within that state for the construction of roads.<sup>42</sup> Some of the roads were to be in the state; others were to join the Ohio River with navigable waters emptying into the Atlantic. As 3 per cent was speedily appropriated for roadmaking within the state,<sup>43</sup> only 2 per cent was left to be expended on highways outside the state. Yet small as the latter percentage was, it had, by December 1805, produced \$12,600.<sup>44</sup> On the recommendation of a Senate committee,<sup>45</sup> Congress voted in 1806 to apply this money towards the construction of a turnpike from Cumberland, on the Maryland side of the Potomac, to a point near Wheeling, on the Virginia side of the Ohio.<sup>46</sup> Because sectionalism and politics caused delay in the selection of a route, contracts were not awarded until 1811 and the section of the road to Wheeling was not opened to traffic until 1817.<sup>47</sup> Nevertheless, by creating the 5 per cent fund and by voting appropriations for the National Turnpike, Congress had taken steps that served as precedents for the improvement of waterways, as well as for the construction of state roads and national turnpikes.<sup>48</sup>

<sup>42</sup> *United States Statutes at Large*, II, 173.

<sup>43</sup> Act of March 3, 1803, *ibid.*, 226.

<sup>44</sup> McMaster, *History of the People of the United States*, III, 469. See also Bogart, *Internal Improvements in Ohio*, 9.

<sup>45</sup> For the committee report, dated December 19, 1805, see *Annals of Congress*, 9th Cong., 1st Sess., pp. 22-26.

<sup>46</sup> *United States Statutes at Large*, II, 357-359. An additional \$30,000 was appropriated for beginning the work.

<sup>47</sup> On the building of the road see Archer B. Hulbert, *The Cumberland Road* (Cleveland, 1904); this is vol. X of the *Historic Highways of America* series; R. Carlyle Buley, *The Old Northwest, Pioneer Period, 1815-1840* (2 vols., Indianapolis, 1950), I, 446-449; John D. Barnhart and Donald F. Carmony, *Indiana From Frontier to Industrial Commonwealth* (4 vols., New York, 1954), I, 288-290. Between 1817 and 1838 the road was pushed across Ohio and Indiana to Vandalia, Illinois, but the federal government relinquished each section, upon its completion, to the state within which it lay.

<sup>48</sup> For a discussion of the application of the 5 per cent plan to road construction in Indiana, see Logan Esarey, *Internal Improvements in Early Indiana* (Indianapolis, 1912), 52-53.

Another significant federal move was the introduction in the Senate, February 23, 1807, of a motion by John Quincy Adams calling on the President to authorize the Secretary of the Treasury to prepare and report a plan for a general system of internal improvements.<sup>49</sup> Adams, a great admirer of George Washington, was strongly of the opinion that highways were essential to the development and strengthening of the nation, and that such improvements should be built by public agencies, since private construction would result in the subordination of the common welfare to private profit.<sup>50</sup> His motion was defeated by a vote of 16 to 12.<sup>51</sup> A few days later, however, Thomas Worthington, of Ohio, secured the passage of a resolution similar to that of Adams by the impressive vote of 22 to 3.<sup>52</sup>

In December of the preceding year, President Jefferson had suggested that the surpluses of the treasury be applied "to the great purposes of the public education, roads, rivers, canals, and such other objects of public improvement as it may be thought proper to add to the constitutional enumeration of Federal powers."<sup>53</sup> Accordingly, he now lost no time in instructing Secretary Albert Gallatin to carry out the Senate recommendation. The result was the justly famed report of April 4, 1808.<sup>54</sup>

This report involved both careful thought and the collection of a vast amount of data from local sources. It argued that, in view of the relative scarcity of capital and "the extent of territory compared to the population," the federal government was the proper agency to carry out the needed improvements. It stressed the advantages of a complete and carefully planned system, in contrast to a partial and helter-skelter development. No single road or canal would attain its maximum usefulness unless it were fitted into a framework designed to develop the nation as a whole.

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<sup>49</sup> *Annals of Congress*, 10th Cong., 1st Sess., pp. 77-78.

<sup>50</sup> Charles F. Adams (ed.), *Memoirs of John Quincy Adams* (12 vols., Philadelphia, 1876), VIII, 444.

<sup>51</sup> *Memoirs of John Quincy Adams*, I, 460.

<sup>52</sup> *Annals of Congress*, 9th Cong., 2d Sess., pp. 77-78, 95, 97. In explanation of Worthington's greater success, Henry Adams points out that the Ohio Senator was "one of Mr. Gallatin's closest friends." *The Life of Albert Gallatin* (New York, 1879, reprinted 1943), 350.

<sup>53</sup> Sixth Annual Message, December 2, 1806, in James D. Richardson (ed.), *A Compilation of the Messages and Papers of the Presidents 1789-1897* (10 vols., Washington, 1896-1899), I (1896), 409.

<sup>54</sup> *American State Papers, Miscellaneous*, I, 724-921.

It was likewise important to carry out improvements that would make possible rapid concentration of the military forces of the country at any given point.

The two main objectives, Gallatin averred, were: (1) to connect the states along a north-south axis, and (2) to bring the settlers beyond the mountains into easy communication with the East. The first objective could be achieved by cutting canals across Cape Cod, New Jersey, Delaware, and the marshes between the Chesapeake and Albermarle Sound, and by constructing a turnpike from Maine to Georgia. The problem of east-west connections involved the use of rivers as well as canals and roads. Four great rivers flowing into the Atlantic should be improved to the head of feasible navigation and then joined by four great roads over the mountains with four other rivers of the Ohio Valley: the Susquehanna to the Allegheny, the Potomac to the Monongahela, the James with the Kanawha, and the Santee or the Savannah with the Tennessee. There should also be a canal around the falls of the Ohio and good roads from Pittsburgh to Detroit, to St. Louis, and to New Orleans. Northward and northwestward the Hudson should be joined with Lake Champlain, and the Mohawk with Lake Ontario. A canal should be dug around Niagara to enable sloops to pass from Lake Ontario to Lake Michigan.

The cost of the above improvements, Gallatin estimated, would not exceed \$16,000,000. But the Secretary suggested—in a sentence that strikingly attested to the strength of the local and sectional conflicts of the day—that considerations of “policy no less than justice” required the allocation of an extra \$3,400,000 for the financing of “local improvements” in states which would not benefit directly from the suggested major improvements. To carry out the entire program, Congress was to pledge \$2,000,000 of the annual surplus for ten years in advance; and the twenty millions thus spent might be partly or wholly replaced by selling to private corporations the canals and turnpikes as they should become productive; or the public money might at the outset be loaned to private corporations for purposes of construction.

The report was read April 6, 1808. A time less propitious could not have been chosen. The embargo had been in effect three months. Trade and commerce were in decline, the whole frontier was in commotion, President Jefferson

was on the point of declaring the people of the region around Lake Champlain to be in a state of insurrection, and the treasury surplus was fast melting away. Under these circumstances, the Senate did no more than order that twelve hundred copies of the report be printed and that six be given to each member of Congress.<sup>55</sup>

Certain congressmen, however, were not willing to let the matter drop. In January, 1810, Senator John Pope, of Kentucky, introduced a bill to authorize a system of internal improvements substantially the same as that recommended by Gallatin.<sup>56</sup> But instead of federal construction and direct appropriations, the measure called for federal subscription to the stock of state-chartered corporations and for government borrowing on the security of the public lands. When no action was taken on this particular bill, Porter presented to the House of Representatives, February 8, 1810, a resolution to appoint a committee to examine the expediency of appropriating public lands for "the opening and constructing such roads and canals as may be most conducive to the general interests of the Union."<sup>57</sup> The suggestion was accepted and a committee of twenty, with Porter as chairman, was forthwith appointed. Later the same month the committee recommended that the government should subscribe for one-half of the stock of any corporation which had been, or which should be, chartered to carry on the works suggested by Gallatin's report.<sup>58</sup> Congress, however, was not prepared to do more, and the session ended without action. The same was true of the session that followed. By the summer of 1812 the country was at war and all federal internal improvement projects not of an urgent nature were indefinitely postponed.

But many Americans—particularly the War Hawks of the West—expected the war itself to provide at least a partial solution to the east-west transportation problem. This it was expected to do by bringing about the speedy defeat of Britain, the annexation of Canada, and the opening of the St. Lawrence to the unrestricted navigation of Ameri-

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<sup>55</sup> *Annals of Congress*, 10th Cong., 1st Sess., p. 332.

<sup>56</sup> *Ibid.*, 11th Cong., 1st Sess., p. 522.

<sup>57</sup> *Ibid.*, 1401.

<sup>58</sup> *Ibid.*, 1443.

can ships.<sup>59</sup> Of course, these high expectations were not realized. In fact, it was only a favorable combination of circumstances that enabled the new republic to emerge from the war without the loss of territory or the limited privilege it enjoyed in the use of the St. Lawrence River.

The war did do one thing, however, and that was to demonstrate in an emphatic manner the urgent need for improved east-west transportation facilities. It was found, for example, that a piece of ordnance worth \$400 at the foundry had cost \$2,000 when delivered on the frontier and that flour had cost \$100 per barrel and oats \$60 per bushel.<sup>60</sup> Army regulations allowed officers "two dollars per 100 pounds per 100 miles" for the transportation of their baggage.<sup>61</sup> The almost universal opinion was that had improved roads and canals been in existence during the war the armed forces would not only have operated more effectively but millions of dollars would have been saved on transportation costs.<sup>62</sup> It was further agreed that the absence of satisfactory roads was one of the reasons that the war had not been more loyally supported by some of the eastern states.<sup>63</sup> Thus the absence of a ready American market for their surplus produce had afforded disgruntled farmers of New York and Vermont a plausible excuse for shipping large quantities of beef, wheat, and other supplies to the British forces in Canada.<sup>64</sup>

There were still other ways in which the war had contributed to the growth of a public demand for improved transportation. It disclosed the great importance of the West. New lands taken from the Indians became available

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<sup>59</sup> See the numerous references cited by Julius W. Pratt, *Expansionists of 1812* (New York, 1925), 12, 34, 42-43, 52, 142, 146-147. See also D. R. Anderson, "The Insurgents of 1811," in *Annual Report of the American Historical Association for the Year 1911* (Washington, 1913), I, 67-176.

<sup>60</sup> James Shriver, *An Account of Surveys and Examinations with Remarks and Documents Relative to the Projected Chesapeake and Ohio and Ohio and Lake Erie Canals* (Baltimore, 1824), 69, quoted in Macgill, *History of Transportation in the United States*, 91.

<sup>61</sup> *Niles Weekly Register*, IV (May 15, 1813), 177.

<sup>62</sup> *American State Papers, Military Affairs* (Washington, 1860), IV, 141; *American State Papers, Miscellaneous*, II, 425, 593, 977.

<sup>63</sup> See, for example, Michael Chevalier, *Society, Manners and Politics in the United States* (Boston, 1839), 233.

<sup>64</sup> See George Prevost's comment of August 27, 1814, quoted in Adams, *History of the United States*, VII, 146, that "two thirds of the army in Canada are at this moment eating beef provided by American contractors, drawn principally from the States of Vermont and New York."

for settlement and a rush of homeseekers to the West followed.<sup>65</sup> The volume of produce to be moved to distant markets significantly increased. Concurrently with the influx of settlers went the introduction of the steamboat to the western rivers and the extension of cotton culture into the Southwest. The first of these developments brought improved transportation to all areas with navigable waters; the second opened up a very profitable field for the employment of labor and capital and gave rise to an important trade in agricultural produce upon the western rivers.<sup>66</sup> The prosperity which came to the southern and western populations increased their ability to purchase such manufactures as they required and thus provided eastern manufacturers with a rapidly expanding market. An eager rivalry developed among the commercial cities of the seaboard to secure a share of the western trade. "The West ceased to be a mere refuge of poverty and field for the adventure of pioneers. The enterprise and capital of the country turned away from the ocean and foreign commerce, and found here a new field for its operation."<sup>67</sup>

But, mainly for three reasons, private capital did not flow in any great volume into transportation. First and most important, capital was extremely scarce. Secondly, most Americans with capital were unwilling to devote their savings to risky investments or to those from which a return would be slow as well as uncertain. Thirdly, persons abroad looking for investment opportunities preferred to lend their money to governmental entities or to corporations whose securities were backed by governmental guarantees.<sup>68</sup> Since the federal government had greater prestige, as well as a greater taxing power than the states, it was to this government that the people continued to look for leadership in the development of the long agitated transportation connections between the East and the West.

The government at Washington seemed inclined to accept the responsibility. On December 3, 1816, President

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<sup>65</sup> Between 1810 and 1816 Kentucky's population grew from 406,511 to 527,000; Ohio's from 230,000 to 400,000; and Indiana's from 24,520 to more than 70,000. *Niles Weekly Register*, X (April 13, 1816), 112.

<sup>66</sup> Callender, "The Early Transportation and Banking Enterprises of the States," 124-129.

<sup>67</sup> *Ibid.*, 130.

<sup>68</sup> *Ibid.*, 131-154.

Madison invited the attention of Congress to "the expediency of exercising their existing powers, and, where necessary, of resorting to the prescribed mode of enlarging them, in order to effectuate a comprehensive system of roads and canals." Such a system, he added, would "have the effect of drawing more closely together every part of our country by promoting intercourse and improvements and by increasing the share of every part in the common stock of national prosperity."<sup>69</sup>

In keeping with the President's suggestions, early in February, 1817, a select committee of the House of Representatives presented to the Committee of the Whole House a detailed report on roads and canals.<sup>70</sup> The moment was particularly opportune, the report emphasized, for undertaking a system of improvements such as Gallatin had recommended in 1808. The pursuits of peace "had been resumed with renovated vigor." Political developments in Europe had tended to emphasize the importance of domestic commerce. Since 1808 the annual revenue had grown from \$14,000,000 to "an average of twenty-five millions." The various parts of the country had indicated a lively interest in the improvement of transportation facilities. Most important of all, it was essential to provide without delay outlets through American territory for the area—"moderately estimated at 60 millions of acres"—bordering on Lake Champlain, the St. Lawrence River, and the Great Lakes. Until such outlets were provided "all the productions of this extensive district" would continue to be drawn to the British ports of Lower Canada, "from whence also the merchandise, the arms, and the influence of Great Britain, are conveyed with unrivalled celerity to the recesses of all the north western indian tribes within our limits." Only by an improved inland navigation could the whole commerce of that region "be advantageously turned to the ports and possessions of the United States."

Nor would the cost be excessive. Federal aid need not exceed \$10,000,000. This might take the form of subscriptions to the stock of private companies chartered by the states to carry out the general plan. The many and varied ensuing benefits would include: (1) an increase in the value of land and in the revenues of the central government; (2) a

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<sup>69</sup> Richardson, *Messages and Papers of the Presidents*, I, 576.

<sup>70</sup> *Niles Weekly Register*, XI (February 22, 1817), 423-427.

strengthening of the federal union "by an indissoluble community of interests, habits and attachments"; (3) an enhancement of the efficiency and striking power of the armed forces; (4) a vast savings in transportation costs and a corresponding expansion of both domestic and foreign commerce. As a plan of procedure the report recommended that the President be requested to take measures for ascertaining as far as practicable, and to report to the House "at the next and every subsequent session of congress, such roads, canals, and improvements in water courses as are required in a general system of inland navigation and intercourse throughout the extent of the United States and the territories thereof, best adapted to facilitate the intercourse necessary for personal, commercial, and military purposes."

The report was not to receive further consideration. At the time of its submission the attention of the House was wholly engrossed by a bill from a select committee appointed on motion of John C. Calhoun. This bill provided that the \$1,500,000 exacted from the Second Bank of the United States as the price of its charter, and the dividends on the \$7,000,000 of its stock owned by the United States, should be set apart as a permanent fund for internal improvements.<sup>71</sup> There followed a long debate in which each state and section contended for advantage.<sup>72</sup> The South was concerned lest the measure strengthen the federal government at the expense of the states. New England feared that improved east-west transportation would further encourage a westward migration that was already threatening to depopulate the Eastern Seaboard. Furthermore, her spokesmen argued that, since New England had built her own roads, it was unreasonable to ask her to help pay for roads in other sections of the country. But the voting strength of the middle and western states was too much for the Northeast and the South. After amending the bill to provide that no works were to be begun in any state without its consent, and that the fund was to be distributed pro rata to the states to be applied by them to internal improvements, the House approved the measure by a

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<sup>71</sup> The bill was introduced December 16, 1816. See *Annals of Congress*, 14th Cong., 2d Sess., p. 296. For the committee's report, see *ibid.*, 361.

<sup>72</sup> For the principal speeches, see *ibid.*, 296, 851-871, 874-914, 916-923, 933-934, 1051-1052.

vote of 86 to 84.<sup>73</sup> A few days later the Senate accepted the House bill by a vote of 20 to 15, every Senator from New England save one voting in opposition.<sup>74</sup>

Although the bill did not reach Madison until the day before the end of his term of office, he did not choose to allow the act to die unnoticed. Instead he promptly sent it back to the House with his veto, explaining that he was doing so because of "the insuperable difficulty" he felt in reconciling the measure with the Constitution.<sup>75</sup> Neither the commerce clause, the clause relating to "common defense and the general welfare," nor any other clause of that document gave Congress the power to construct roads and canals within the individual states. But, since the proposed law dealt with matters of great importance, he hoped that "its beneficial objects" might be attained by amending the Constitution—the procedure marked out in that instrument itself.

Madison's veto was followed nine months later by Monroe's first annual message, in which he stated his belief that the Constitution did not empower Congress to establish a system of internal improvements and, like his illustrious predecessor, recommended an amendment to convey the power.<sup>76</sup> To the friends of internal improvements these constitutional scruples of the Virginia dynasty, although accompanied by approval of a plan for internal improvements at federal expense, came as a challenge. In an important debate on the constitutionality of national improvements, in 1818, the House of Representatives, voting on four resolutions submitted by William Lowndes, of South Carolina,<sup>77</sup> declared by a vote of 90 to 75 that Congress had power to appropriate money for the construction of military roads, and of other roads, and of canals, and for the improvement of water-courses. But it decided against the power to construct post roads and military roads (82 ayes to 84 naves); against the power to construct roads and canals necessary to commerce between the states (71 to 95); and against the power to construct canals for military purposes (81 to 83).

It was clear after this debate that there was not a sufficient majority to override the veto which might be expected

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<sup>73</sup> *Ibid.*, 934.

<sup>74</sup> McMaster, *A History of the People of the United States*, IV, 415.

<sup>75</sup> Richardson, *Messages and Papers of the Presidents*, I, 584-585.

<sup>76</sup> *Ibid.*, II, 19.

<sup>77</sup> *Annals of Congress*, 15th Cong., 1st Sess., pp. 1249, 1383-1389.

from the President. On the other hand, the majority were unwilling to hazard the rights which they claimed to possess by appealing to the states for a constitutional amendment. What was to be done? In 1819 the President approved a bill authorizing the employment of the army in the construction of roads of military significance,<sup>78</sup> and under this authorization several important roads were constructed. But this, as everyone realized, was only a makeshift, in no sense a substitute for a comprehensive construction program. In 1822 Congress approved a bill authorizing the President to cause tollhouses, gates, and turnpikes to be erected on the Cumberland Road and to appoint toll-gatherers with power to enforce the collection of tolls to be used for the upkeep of the road.<sup>79</sup> The President vetoed the bill on the ground that it implied a power to adopt and execute a complete system of internal improvements, a power which he was certain the Congress did not possess and the states individually could not grant.

The failure of the federal government to accept the position of leadership in the development of transportation facilities meant that if east-west water connections were to be established they would have to be provided by the states. Nothing loath, the states accepted the challenge and plunged into a program of canal and road construction the like of which the country had never seen before. Without federal aid of any kind, New York built her famous Erie Canal, linking Lake Erie with the Hudson River, and Pennsylvania constructed her equally famous amphibious transportation system to join the Susquehanna with the Ohio. Later, assisted by federal land grants, Illinois built a canal to connect Lake Michigan and the Illinois River, Ohio constructed two canals to link the Great Lakes with the Ohio River, and Indiana, with the co-operation of Ohio, built a canal between Evansville, on the Ohio, and Toledo, on Lake Erie.<sup>80</sup> Later

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<sup>78</sup> *United States Statutes at Large*, III, 480.

<sup>79</sup> *Annals of Congress*, 17th Cong., 1st Sess., pp. 443, 577.

<sup>80</sup> See John Bell Rae, "Federal Land Grants in Aid of Canals," *Journal of Economic History*, IV (1944), 167-177. See also James W. Putnam, *The Illinois and Michigan Canal* (Chicago, 1918); Bogart, *Internal Improvements and State Debt in Ohio*; C. P. McClelland and C. C. Huntington, *History of the Ohio Canals* (Columbus, 1905); Esarey, *Internal Improvements in Early Indiana*; Barnhart and Carmony, *Indiana From Frontier to Industrial Commonwealth*, I, 295-298.

still, with federal assistance, Kentucky built a canal around the falls of the Ohio.<sup>81</sup>

The states, forced to depend primarily on their own resources, no doubt learned something about the virtues of self-reliance. But some of the other consequences of state development of transportation routes were not so praiseworthy. The highways, built without the benefit of central direction or national planning, were sometimes routed in such a manner as to divert traffic from the transportation systems of neighboring states. More serious still, priority of construction was not always given to the projects best calculated to promote the development of the nation as a whole. Competition did not reach the cut-throat stage, but it did prevent the development of a comprehensive, integrated system of transportation. It also encouraged the states to spend more money than they could well afford, making them vulnerable to the onslaught of the Panic of 1837. The credit side of the ledger, however, is more weighty than the debit. Even though of all the important canals only the Erie was a financial success, all of the major state-developed waterway improvements reduced transportation costs, stimulated east-west trade, and contributed significantly to the development of the extensive regions that they served.<sup>82</sup> More important still, by helping to bind the West to the East by "the strong chains of commerce," they made a contribution of immeasurable importance to the steadying and strengthening of the Federal Union.

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<sup>81</sup> Buley, *The Old Northwest*, I, 435-436.

<sup>82</sup> Rae, "Federal Land Grants in Aid of Canals," 173-174; Putnam, *The Illinois and Michigan Canal*, 154-156; Bogart, *Internal Improvements in Ohio*, 78-89.