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## Good land–bad land: ecological knowledge and the settling of the old Northwest, 1755–1805

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### ABSTRACT

The settlement of the Old Northwest and more specifically of the territory that became the state of Ohio did not take place according to the pattern of a slowly moving frontier. Instead, the land was settled in a very irregular way, with patches of settled land spreading along the Ohio and Scioto River from the south well up to the north. One reason for this irregular settlement pattern was knowledge about what was conceived as ‘good’ and ‘bad’ land. Based primarily on the narratives of early travelers and observers, this article analyzes the content, origin and political usage of ecological knowledge in the settlement of Ohio. How was ecological knowledge developed and how was it spread? To what extent was Indigenous knowledge included and where did it come from? How did knowledge transfer between the Indigenous knowledge system and the Euro-American knowledge system occur? Where was knowledge transfer successful and where did it fail?

### Introduction

The exploration and settlement of the land west of the Appalachian Mountains, the settlement frontier, took place in a *laissez-faire* fashion with few regulatory obstacles. Surveyors, speculators and settlers claimed and appropriated land according to the available knowledge about the quality of the land, the accessibility of the land by travel and trade routes or waterways, and information about how to cope with the specific environment and climate at the frontier. The same holds true for the distribution of land titles in the complex economic system of the Early Republic, when land was used as currency. Land parcels were not always assigned in a consecutive, linear way, but more according to the wishes of the future landowners who again identified their preferred location based on information about ‘good land’.<sup>1</sup> This practice created a patchwork ‘agricultural frontier’ of the Old Northwest understood as ‘places undergoing relatively rapid transformation in land management practices’.<sup>2</sup>

After the American Revolution, the question of identifying good land occupied a whole generation of surveyors, speculators, agents of land companies, missionaries and of course settlers.<sup>3</sup> John Jacob Eyerly, Jr, for example, who in the 1790s traveled through

Pennsylvania and Ohio in order to survey the lands near Presque Isle, Pennsylvania, entitled to the Moravian Mission after the Gnadenhutten massacre of 1791, wrote in 1794:

We saw some tracts of very good land today, suitable for single plantations, abounding in sugar trees, maple, and the like. I saw chestnut trees, too, today, 6 or 7 feet in diameter at the butt and of an amazing height. We had no thought, however, of surveying here for the Society, for the land here is inferior in many ways to that on the East Branch of French Creek. [...] Except for one small patch, the French Creek tract is very good rich land, with many clearings in the bottom lands where, from all appearances, the Indians used to dwell. Where these bottoms are not cleared, they are densely overgrown with white walnut, wild cherries, and the like.<sup>4</sup>

Similar observations can be found in many diaries and travelogues written in the late eighteenth and early nineteenth centuries. Many of these journals and diaries were published or distributed among family and friends. The information about land was thus disseminated rather quickly and reached a large audience. While environmental historians have pointed out the close connection between European colonialism and expansion and the ecological transformation of the conquered and settled land,<sup>5</sup> the link between 'knowledge', 'space'/'environment' and 'domination' in the context of settler colonial systems still needs further consideration and analysis.

Contemporary knowledge about 'good land' and 'good roads' resulted from a knowledge system composed of several interrelated components. Among these components was practical knowledge accumulated in a first settlement experience in the back country of the former 13 Colonies; adapted knowledge gained from experiences in Europe and transferred to the North American ecological system; or scientific knowledge gathered by early explorers, geographers, botanists, road makers, surveyors and adventurers and published in journals and travelogues. Furthermore, Indigenous knowledge acquired and appropriated by Euro-American fur traders, hunters, scouts, and missionaries was a crucial component of this knowledge system. This group of actors developed their knowledge about 'good land' through multifarious practices, ranging from the observation of Indigenous settlement patterns, from living among the native population and traveling with them, or by hunting and fishing together. Hunters, fur traders, scouts and missionaries very often presented already processed or 'translated' information about the quality of the land, the character of the environment or the climate. They adapted and projected the appropriated Indigenous knowledge to Euro-American economic objectives.

Hence, the patchwork agricultural frontier and the concomitant changes in the character of land caused by Euro-American colonization of the Old Northwest were also the result of a complex system of knowledge transfer. This system was characterized by the selective appropriation, adaptation and translation of Indigenous knowledge by Euro-American actors, who did not necessarily themselves settle at the Western frontier. Selective knowledge transfer together with the practice of selling and buying but not necessarily settling land resulted in the creation of the patchwork frontier with multiple 'contact zones'<sup>6</sup> and localized 'middle grounds'.<sup>7</sup> Hence, geographical fragmentation and dispersed location of spheres and zones of interaction characterized the settler colonial system in the immediate aftermath of the American Revolution. In order to reconstruct the system of knowledge acquisition and knowledge transfer that contributed to the creation of a patchwork agricultural frontier I will analyze four witnesses' accounts of journeys into and through the territory of the Old Northwest made before and after the American Revolution. The

descriptions of land presented in these four texts cover the time period between 1755 and 1805. My historical observers and narrators were prominent citizens of New England and their publications were widespread. They are well known to historians of the post-revolutionary United States: James Smith (1737–1812/1814, Pennsylvania), Manasseh Cutler (1742–1823, Connecticut), John Jacob Eyerly, Jr (1757–1800, Pennsylvania) and Thaddeus Mason Harris (1768–1842, Massachusetts).

I have chosen these four accounts out of an abundance of published letter collections, day books, journals or diaries written by late eighteenth- and early nineteenth-century explorers, surveyors, geographers, botanists and adventurers.<sup>8</sup> This relatively large group of early witnesses of the ecology, geography, economy and culture of 'Indian land' was traveling mostly on horseback or on foot with an average speed of 15–20 miles a day. Their daily reports contain descriptions of local environments in great detail. The early travelers commented on the state of the roads and waterways, the quality of land, but also on the 'Indian'<sup>9</sup> population, their traditions and customs, their way of life and their warfare tactics. They were eager to commit their observations to paper, for a variety of reasons. Day books, journals and diaries very often served as a way to relate and to share experiences with friends and families. They also were used as source material for scholarly descriptions of the nature and environments that were later published and distributed to a larger interested audience. Information provided in these texts was important for military and economic purposes, too. Surveyors and land agents used the insights of explorers, hunters and scouts to encourage settlers to buy land and to migrate farther west.

The texts chosen for this article cover this broad spectrum of different motifs, interests and observation perspectives. All four describe the territory of the Old Northwest, that is, the land northwest of the treaty line defined by the Treaty of Paris in 1763 as 'Indian territory'. This land was re-colonized by the USA 20 years after France was forced out of the area with the Treaty of Paris of 1763 and Great Britain had guaranteed a border line defining the settlement frontier for the settlers of the 13 Colonies. The Northwest Territory as defined 20 years later, again in a treaty signed in Paris, contained six future states: Ohio (1803), Indiana (1816), Illinois (1818), Michigan (1837), Wisconsin (1848) and Minnesota (1858). All of our authors had an interest in exploring, conquering and settling the territory, as member of the army during the Revolutionary War, as surveyor and member of a land company, or as a member of a protestant missionary movement, but none of them established a pioneer farm himself. All four men belong to the group of early White explorers who just passed through the Ohio area and returned with their notes and records to eastern, that is, Euro-American bases.<sup>10</sup> The information provided in their journals, books and pamphlets served settlers willing to establish a farm or a town in the Ohio territory to decide on the possible location for a settlement and the best itinerary to this location.

Similar to the transatlantic journey that many European immigrants of the nineteenth century had to make, and for good reasons were afraid of, in the second half of the eighteenth century, traveling across the Alleghenies into the territory west of the Ohio was a very strenuous and even dangerous affair. Jacob Eyerly, who was already quoted above, wrote for example, after several days of traveling and surveying land in the Presque Isles area:

We all badly needed rest, the horse included, having had to make the journey from Pittsburg to this place [i.e. French Creek, Presque Isles] – to say nothing of the return to Fort Franklin [ahead of us] – on foot. We had only the one horse, and it had had to make the whole journey, carrying our baggage, with nothing to eat but grass. There had been so much rainy weather, our clothes were practically rotting on our bodies.<sup>11</sup>

Since accessibility of the land was at least as important as the quality of the land, Manasseh Cutler, surveyor and land agent of the Ohio Company, glossed over these difficulties. His descriptions of the Ohio Territory even contain misleading and incorrect information regarding the topographical, ecological and climatic situation of the Ohio and Scioto Valleys, in order to entice potential settlers to buy land from the Ohio Company.<sup>12</sup>

The observations presented by all four historical actors are biased in several respects and different ways. Information about the quality of roads and lands is not always correct, as in the case of Manasseh Cutler. Or the description of the interactions with the Indigenous peoples is too optimistic, as in the case of Jacob Eyerly. An analysis of knowledge acquisition and knowledge transfer has to consider these biases. Moreover, the analysis of knowledge transfer between a colonizing and a colonized group that itself has left almost no written testimonies of the encounters with the settler colonialists has to carefully deconstruct the dominating settler colonial discourse framing the accounts. This discourse reflected the political and material interests of the settler colonial system and translated into the establishment and reproduction of specific epistemes about good land, confirmed and disseminated through the narratives and accounts of the early travelers. In order to avoid the trap of uncritically reproducing the Euro-American knowledge system present in the accounts, my reading will be guided by postcolonial perspectives, more specifically by Edward Said's method of contrapuntal reading. To read a text contrapuntally, as Said puts it, is to read 'with a simultaneous awareness both of the metropolitan history that is narrated and of those other histories against which (and together with which) the dominating discourse acts'.<sup>13</sup> He argues, that 'if one studies some of the major metropolitan cultures [ ... ] in the geographical context of their struggles for (and over) empires, a distinctive cultural topography becomes apparent'. Reading the metropolitan history, or in our case, the stories presented by the Euro-American colonizers of the Old Northwest, contrapuntally implies a special attentiveness of the reader for the:

way in which structures of location and geographical reference appear in the cultural languages of literature, history, or ethnography [ ... ] plotted, across several individual works that are not otherwise connected to one another or to an official ideology of 'empire'.<sup>14</sup>

In an adaptation of this contrapuntal method, my analysis will pay special attention to the ecology of the settler colonial knowledge system as being represented in the four texts. I will deconstruct the presented spatial and geographical information with regard to hidden and implicit modes of knowledge appropriation and knowledge transfer between the Euro-American authors and the Indigenous peoples whose land they describe, in order to entice interested settlers to go there and to physically seize and take hold of the land through settlements. Through this specific reading, my analysis attempts to 'decolonize knowledge'<sup>15</sup> and thus to contribute to the ongoing debate about Indigenous knowledge, its connection to the land, and its possible exploitation in the context of its integration into Western scientific frameworks to facilitate the settlement process in the early period of settler colonialism in the Old Northwest.<sup>16</sup>

We currently can observe a significant paradigm shift in which Indigenous knowledge and ways of knowing are recognized as complex knowledge systems with an adaptive integrity of their own.<sup>17</sup> Efforts to include Indigenous 'knowledges' into our academic and scientific discourses have gained momentum since the late 1990s. These efforts have transformed Western understandings of Indigenous knowledge on many different levels. They have created an academic and scientific space where Indigenous values and 'knowledges' are respected and supported, where Indigenous methodologies and decolonizing perspectives are included, where multiple truths are accepted, where epistemic differences are bridged, and where subjectivity and spiritual components have legitimate value beside objectivity and empirical evidence.<sup>18</sup> A very good example of translating this perspective into historical research is the work of Canadian historians Brenda Macdougall, Carolyn Podruchny and Nicole St-Onge, all three specialist in Metis history.<sup>19</sup> Their work as well as that of Candace Savage and Keith Basso<sup>20</sup> stresses above all the connection between Indigenous knowledge and space. The analytical perspectives developed by these studies combine approaches in the field of environmental history, human geography, as well as the 'topographical turn'.<sup>21</sup> These new approaches focusing on the locality of interaction patterns and the ecology and geography (spatiality) of Euro-Indigenous knowledge systems transform the 'classic' discourse-historical criticism, like Edward Said's *Orientalism*, into an analysis of settler colonialism focusing on the immanent colonialism of spatial representations and spatial narratives of European expansion. They thereby not only implement Edward W. Soja's program 'to spatialize the historical narrative'<sup>22</sup>, but offer a decolonizing analysis of cultural configurations through historical-empirical research. I follow the paths opened by this important paradigm shift in order to determine the role of knowledge transfer in the polycentric and entangled knowledge systems of settler colonialism characterized by conflicts over space and conflicts through space transcending ethnic and cultural borderlines.<sup>23</sup>

### **The ecology of the settler colonial knowledge system: knowledge networks, knowledge transfer, and representations of spatial and geographical information**

My analysis aims at reconstructing possible developments in the ecology of the settler colonial knowledge system over time and at deconstructing changes of the geographical and spatial information presented in my four exemplary texts. Therefore, I will read the texts in a chronological order and contextualize them by describing the specific backgrounds of our authors, their experiences, their possible motifs and interests as well as the knowledge networks they were part of. James Smith is the oldest of our group. He was born in what is now Franklin County, Pennsylvania, in 1737. He was a typical frontiersman and farmer with a military career during both the French and Indian War and the Revolutionary War. He had little education, but could read and write. As a young adult, he was 17 years old, he worked with a team of road builders that constructed the Pennsylvania Road to the Ohio River to facilitate General Braddock's military campaigns during the French and Indian War. As the group reached the Alleghenies in May 1755, Smith was taken captive by Delaware 'Indians'. They brought him to Fort Duquesne at the forks of the Ohio, the location of today's Pittsburgh. He was adopted by a Mohawk family and lived with this family and its large network of relatives for four years. He traveled and hunted

with the Indigenous peoples in the area north of Fort Duquesne, the territory between the Muskingum, Ohio, and Scioto rivers, and along the shores of Lake Erie to the mouth of the Sandusky River. He learned much about 'Indian' trails, fighting techniques and coping mechanisms regarding the rough climate.<sup>24</sup> After his return to Pennsylvania, he used the knowledge he had acquired during captivity as a scout for the exploration of the Ohio territory in military campaigns before the American Revolution and as a colonel of the Pennsylvania militia during the American Revolutionary War. After the war, he served as a legislator in the Kentucky General Assembly and was involved in Kentucky's settlement policy.

In 1799, he published his autobiographical narrative *An Account of the Remarkable Occurrences in the Life and Travels of Col. James Smith*,<sup>25</sup> consisting of the description of 'Indian' culture and war fighting techniques, interspersed with observations about the landscape, the climate, roads and rivers. His descriptions, for example, of the route they took after his capture contains very concrete information about distances and towns, to which he added information about the quality of land. Here are some examples:

They took me in a canoe, up the Alegheny River to an Indian town that was on the north side of the river, about forty miles above Fort Duquesne. Here I remained about three weeks, and was then taken to an Indian town on the west branch of Muskingum, about twenty miles above the forks, which was called Tullihhas, inhabited by Delaware, Caughnewagas and Mohicans. – On our tour betwixt the aforesaid towns, the country was chiefly black-oak and white-oak land, which appeared generally to be good wheat land, chiefly second and third rate, intermixed with some rich bottoms.<sup>26</sup>

We then moved to the buffaloe lick, where we killed several buffaloe, and in their small brass kettles they made about half a bushel of salt. I suppose this lick was about thirty or forty miles from the aforesaid town, and somewhere between the Muskingum, Ohio and Sciota. About the lick was clear, open woods, and thin white-oak land, and at that time there were large roads leading to the lick, like waggon roads.<sup>27</sup>

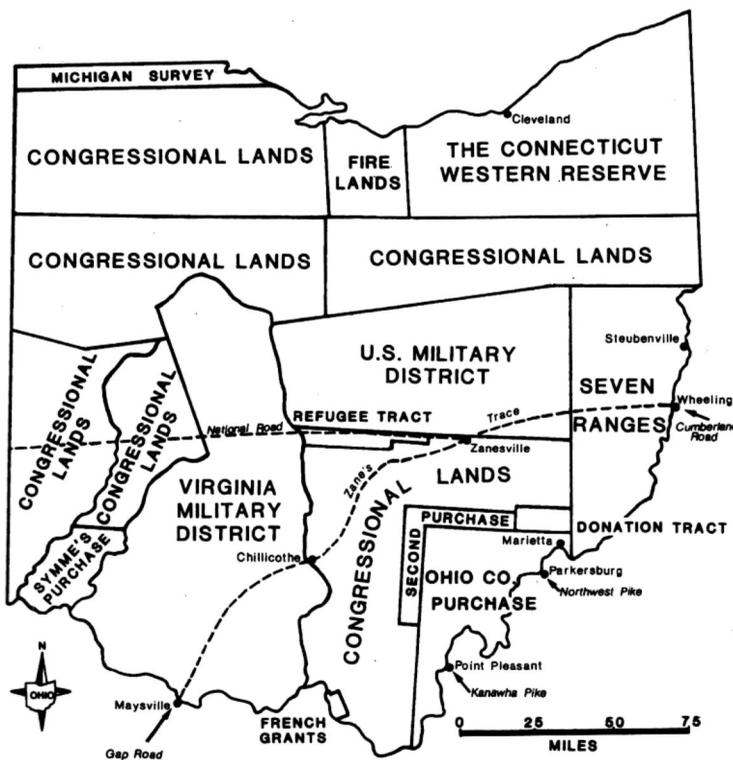
I remained in this town until some time in October, when my adopted brother called Tontileaugo, who had married a Wiandot squaw, took me with him to Lake Erie. We proceeded up the West branch of Muskingum, and for some distance up the river the land was hilly but intermixed with large bodies of tolerable rich upland, and excellent bottoms. [...] On the head waters of this branch [i.e. West branch of Muskingum River] there is a large body of rich, well lying land – the timber is ash, walnut, sugar-tree, buckeye, honey-locust and cherry, intermixed with some oak, hickory, etc.<sup>28</sup>

The presented knowledge about 'good' or 'bad' land interrupts the narrative and reads like information added to the original text during the process of preparing the autobiography for publication. Smith's account seems to combine knowledge about land that he has acquired in a variety of functions and at different times: as a road builder, during captivity, as a soldier during expeditions into the Ohio country and the Revolutionary War in the period 1755–1780. On the one hand, the information about 'good land' that he presents in his account reflects the established Euro-American agricultural knowledge that was disseminated in the publications of agricultural societies, which started to regularly publish 'useful knowledge' in serial publications in the early 1790s.<sup>29</sup> On the other hand, his accounts of hunting, fishing and crop farming, and of waterways, portages, trails, salt licks and so on are examples of how practical or experienced knowledge was transferred between Indigenous and European knowledge systems. Smith thus is a telling example of

the creation of what Harald Fischer-Tiné has called 'Pidgin-Knowledge', meaning the production of knowledge in the colonial encounter by (selectively) integrating, stealing, or appropriating Indigenous knowledge and combining it with European scientific, or strategic knowledge.<sup>30</sup> Smith's information about Indigenous warfare techniques was considered 'precious' knowledge at the time before and after the American Revolution. In the foreword of the edition of his journal, he himself pointed out that the passages about 'Indian' warfare might be most important to the public:

The principal advantage that I expect will result to the public, from the publication of the following sheets, is the observations on the Indian mode of warfare. Experience has taught the Americans the necessity of adopting their mode, and the more perfect we are in that mode, the better we shall be able to defend ourselves against them, when defense is necessary.<sup>31</sup>

In contrast to James Smith, our second observer, Manasseh Cutler, was a well-educated and highly literate man who developed an economic interest in the Ohio territory as a founding member, surveyor and agent of the Ohio Land Company. Cutler, born in Killingly, Connecticut in 1742, took part in drafting the Northwest Ordinance of 1787 and participated in the survey of the Seven Ranges, the Connecticut Reserve and the Virginia Military District (Figure 1).<sup>32</sup>



**Figure 1.** Ohio land divisions.

Source: Artimus Keiffer, *The Geography of Ohio*, rev. and updated ed. (Kent, OH: Kent State University Press, 2008), 67.

He had graduated from Yale College (1765) and served as chaplain of the Congregational Church during the Revolutionary War. Besides being proficient in the theology, law and medicine of his day, he conducted astronomical and meteorological investigations and was one of the first Americans to pursue significant botanical research. He was elected member of several learned societies and served as a Federalist representative in Congress from 1801 to 1805. Cutler's pamphlet *An Explanation of the Map of Federal Lands Etc.* published in 1787<sup>33</sup> was produced for the Ohio Land Company to encourage sale of land in the Ohio Valley. In order to give his narrative a scientific and thus objective touch, Cutler had it certified by Thomas Hutchins, the first and only 'Geographer of the United States'. Hutchins assured in the foreword of Cutler's pamphlet that 'the facts [...] respecting the fertility of the soil, production, and general settlement, etc. are judicious, just and true'.<sup>34</sup> Cutler's advertising brochure painted a very promising picture of the land his company intended to sell:

The lands that seed the various streams [...] which fall into the Ohio, are [...] interspersed with all the variety of soil which conduces to pleasantness of situation, and lays the foundation for the wealth of an agricultural and manufacturing people. Large level bottoms, or natural meadows, from 20 to 50 miles in circuit, are every where found bordering the rivers, and variegating the country in the interior parts. These afford as rich a soil as can be imagined, and may be reduced to proper cultivation with very little labour. It is said, that in many of these bottoms a man may clear an acre a day, fit for planting with Indian corn; there being no underwood; and the trees, growing very high and large, but not thick together, need nothing but girdling.

Very little waste land is to be found in any part of the tract of country comprehended in the map which accompanies this. There are no swamps; and though the hills are frequent, they are gentle and swelling, no where high nor incapable of tillage. They are of a deep, rich soil, covered with a heavy growth of timber, and well adapted to the production of wheat, rye, indigo, tobacco, etc.<sup>35</sup>

In 1789, a French edition of Cutler's booklet was published anonymously in Paris with some additions and modifications.<sup>36</sup> Land agents of the Scioto Land Company used the French edition to induce French immigrants shortly before the outbreak of the French Revolution to establish their settlement at Gallipolis on the Ohio River.<sup>37</sup> How misleading Cutler's descriptions were becomes evident by comparing them with the description of the same land by other authors. For example, the author of our fourth text, Thaddeus Mason Harris – he will be introduced later – described Gallipolis as 'handsome' but 'unhealthy'. He even pointed out that the first nearly five hundred French emigrants who arrived in 1792 found themselves 'deceived in their purchase, visited with desolating sickness from the unhealthiness of the place, and endangered by the Indian war which prevailed in their vicinity'.<sup>38</sup> Neither the English nor the French version of the pamphlet did mention the fact that the land described was still inhabited by the Indigenous population.

The knowledge about 'good land' presented in Cutler's pamphlet perhaps more than in any other text analyzed in this article catered to the assumed expectations of a pioneer settler. Cutler had gathered information during his journey and complemented it with second-hand information retrieved from contemporary geographical and biological studies. In order to project the impression of true and verified information, the text is written in the scholarly style and language typical for the natural sciences in the late eighteenth century. Similar to the descriptions of land presented by James Smith, Cutler's descriptions very much reflect the established Euro-American geographical, topographical

and ecological knowledge. Moreover, his account is framed by the standard narrative of the settlement of the Old Northwest as a linear and well-organized process.

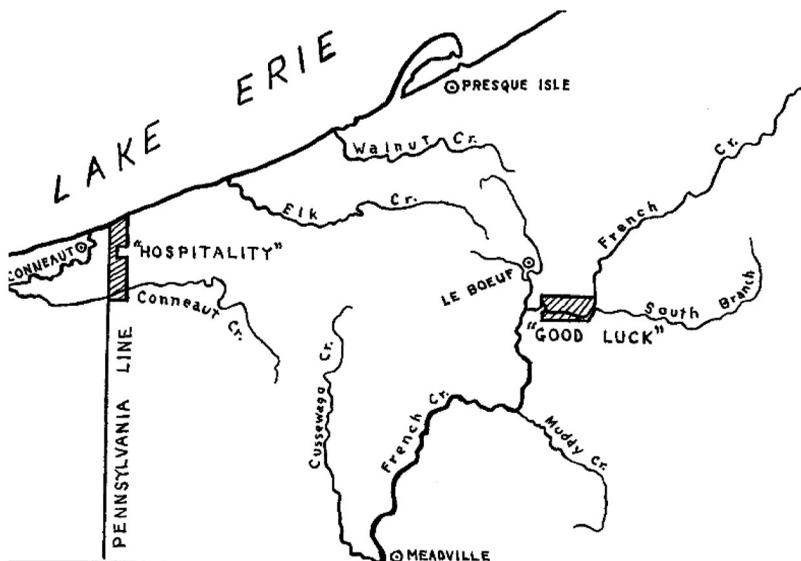
This narrative of a constantly moving linear frontier is highly problematic, as Hanno Scheerer has shown in his analysis of the *Struggles for Control over Land in Ohio's Virginia Military District, 1776–1810*.<sup>39</sup> A 'just' and orderly settlement was a political objective, but this objective could not be realized in all the territory that fell under the jurisdiction of Congress with the Treaty of Paris in 1783. Manasseh Cutler, at least, felt compelled to underline that the settlement of the country owned by the Ohio Company was 'regular and judicious a manner', according to 'the design of Congress and of the settlers [ ... ], that the settlements shall proceed regularly down the Ohio; and northward to Lake Erie', but he also mentioned the problem of illegal settlements. Cutler integrated the political problem of squatting into the narrative of a linear moving frontier. He argued that the settlement of the Ohio Company 'will be a continuation of the old settlements leaving no vacant lands exposed to be seized by such lawless banditti as usually infest the frontiers of countries distant from the seat of government'.<sup>40</sup> Enticed by accounts of the abundance of 'good land' provided by propaganda pamphlets like Cutler's many poor settlers crossed the Ohio and settled themselves on the lands without proper title hoping that Congress would validate their 'tomahawk claims' at a later time. Thus, the information provided by explorers, surveyors and land agents about 'good' land situated west of the Alleghenies, which rapidly became public knowledge, also produced unintended consequences. Poor settler families crossed the mountains on the often 'indistinguishable footpaths' that were announced in the information and propaganda literature as 'roads' to find the promised 'good land'. These 'pioneer settlers' settled very often in areas that were not yet surveyed. They produced huge problems for a political system trying to establish mechanisms of good governance in areas remote from the political center.

By 1785, army reports estimated three hundred squatters at the falls of the Hocking River and the same number at the Muskingum. More than fifteen hundred people had settled on the Scioto and the Little and Great Miami Rivers, in the Virginia Military District.<sup>41</sup> Andrew Cayton rightly remarks that it cannot be determined precisely how many squatters settled on the northwestern side of the Ohio, but he places the number in the thousands.<sup>42</sup> Hanno Scheerer argues that illegal settlements on federal land challenged congressional sovereignty and public ownership in the immediate aftermath of the American Revolution. Squatting was unacceptable to Congress for two reasons: 'first, squatters imperiled the congressional plan to yield revenue from its public lands and second, their presence on the northwest side of the Ohio agitated the Ohio Indians and threatened to provoke an Indian war'.<sup>43</sup> Therefore, throughout 1785 and well into 1786, Congress used military force to remove the squatter threat from the territory. Consequently, patchwork settlements of poor pioneer families were not only the target of Indigenous peoples who retaliated against the intrusion on their land by raiding log cabins and pioneer farms. Pioneer settlers were also threatened by military force acting under congressional order and trying to implement a regulated system of surveying, selling and settling of land. By order of Congress settlements without land title were destroyed and settlers were removed from the land they had cleared.

Our third observer is the Moravian John Jacob Eyerly, Jr. He was born in 1757 and was thus 20 years younger than James Smith. Eyerly lived most of his life in the Moravian town Nazareth, Northampton County, Pennsylvania, founded by German immigrants in 1740.

Like James Smith, he was an active politician as a member of the Pennsylvania legislature to which he was elected in 1788. Whereas Manasseh Cutler supported the efforts to compensate the veterans of the Revolutionary War, Eyerly fought for a compensation for the losses of his church's 'Indian' mission after the Gnadenhutten massacre of 1782. The campaign was very successful. Already in 1785, the United States Congress had made land grants to the Moravians on the Tuscarawas River, comprising their old settlements at Schonbrunn and Gnadenhutten in the Northwest Territory.<sup>44</sup> In 1791, the Pennsylvania Legislature followed suit and granted land on French and Conneaut Creeks near Presque Isle, Pennsylvania, in the Erie triangle. In May and June 1794, Eyerly, accompanied by John Heckewelder,<sup>45</sup> went on a survey trip to the Pennsylvanian border despite the fact that in May 1794, after violent conflicts between the Six Nations and pioneer settlers had intensified, the establishment of a Moravian Mission at Presque Isle had been suspended. Eyerly nevertheless took the 'Indian' path from Pittsburgh to Franklin and Le Boeuf to survey the entitled lands. Although the journey was not easy, he was enthused by the quality of the land he found in the assigned territory (Figure 2):

Presque Isle is a beautiful site for a town. It has a glorious prospect, and will without doubt some day be a fine commercial town. The bay swarms with all kinds of fish. The Indians had caught a sturgeon here which they gave to Mr. Rees's men. It weighed over 50 lbs. The land about Presque Isle is excellent, the soil for the most part very rich. Sassaparill, ginseng and nettles grow here in abundance, large and juicy. On the Conneought, where we ran the survey, there is very good farmland bordering the lake. Farther back towards Conneought there are splendid meadows and here and there good farmlands. The trees here are mostly shellbark, hickory, black and white oak, beech, maple, poplar, sugar maple, and ash. The Conneought is somewhat larger than the Manakosy at Bethlehem, and I think there are good mill sites on the tract we surveyed, which is a good thing because, although the land is well watered, it all comes from tiny runs that rise quickly when it rains but as quickly go down again.<sup>46</sup>



**Figure 2.** Moravian lands on French and Conneaut creeks.

Source: Paul A. W. Wallace, 'Jacob Eyerly's Journal, 1794: The Survey of Moravian Lands in the Erie Triangle', *Western Pennsylvania Historical Magazine* 45, no. 1 (1962), 12.

Eyerly put down his observations in a journal that was probably distributed among the members of the Moravian Church.<sup>47</sup> Eyerly describes the quality of the land and the strenuousness of the journey at length. He talks about the unreliability of local scouts pretending to know the path and trail system of the area but turning out to be completely ignorant. His account is interspersed with descriptions of friendly encounters and knowledge exchange with the Indigenous peoples during this time of crisis. While waiting for a surveyor at Fort Franklin, Pennsylvania, which formerly was the 'Indian' town of Venange, situated at the junction of French Creek with the Allegheny River, John Eyerly observed the integration of Indigenous peoples into the complex and highly problematic frontier economic system that is now well known to historians of settler colonialism in North America:

We found many Seneca Indians here. They come and go all the time, the reason being that while they are here they are provided with food at government expense. There are three stores here where the Indians sell their furs, usually for liquor. They are often so drunk one can hardly sleep at night for the noise. My landlord told me he was daily expecting an Indian chief from Conneought Town and very much hoped he would come while I was here because he thought his mediation could be of great assistance to me.<sup>48</sup>

In stark contrast to the interaction patterns and the quality of 'Indian'-White encounters at a large trading post, like Fort Franklin, Eyerly's encounters with Indigenous peoples in the not yet settled areas that he traveled through were characterized by friendly exchange and mutual respect. For example, when Eyerly arrived at Presque Isle and went further west along the lakeshore, he saw some 'Indians' whom he asked for directions, supposing they were Seneca. But they were Missasagos who understood neither English nor Seneca. 'They were, however, very friendly', Eyerly pointed out and he continued his account by reporting a barter trade with the Missasagos: 'I gave them some bread and tobacco, and had them take me and the surveyor in a bark canoe a little way out into the bay, where they caught us a fine fish and then brought us ashore again'.<sup>49</sup> Or at another occasion he reported:

On the 5th, we got off to an early start, and in a couple of hours came to an Indian camp where we found more than 20 Indians, men, women, and children. Though we could not speak each other's language, we found them very friendly. They gave us a fish and some cranberries, and I gave them some bread and tobacco.<sup>50</sup>

Eyerly thus shares the positive and friendly attitude towards the Indigenous peoples that had characterized Moravian missionaries ever since their arrival in North America in 1735. This contrasted starkly with the attitude of most other settlers who normally ignored or more likely feared the Indigenous population. Most of the early settlers regarded the 'Indians' as 'savages', 'non-human, brutal enemies', and a menace to their security and to their right to settle where they wished. Not so the Moravian missionaries.<sup>51</sup> In contrast to Manasseh Cutler's writings and similar to the observations of James Smith, Eyerly underlined the friendliness and hospitality of the Indigenous peoples. Smith's and Eyerly's reports are full of information about the broad spectrum of practices of knowledge transfer that starts with learning by doing, invitations to observe and to participate in Indigenous practices, communicative ways of knowledge exchange, often with the help of an interpreter or through both sides having acquired knowledge about the other's languages. Regarding language acquisition, James Smith, for example, writes:

As Tontileaugo [the adopted brother of James Smith, ] could not speak English, I had to make use of all the Caughnewaga I had learned even to talk very imperfectly with him: but I found I learned to talk Indian faster this way, than when I had those with me who could speak English.<sup>52</sup>

He also described in great detail Indigenous hunting and fishing techniques, the techniques of trap making, collecting water from maple trees and the production of sugar and so on.

Thaddeus Mason Harris, our last author, was born 7 July 1768 in Malden, Massachusetts. His journey took place twenty years after Manasseh Cutler's and John Eyerly's first experience of the territory of the Old Northwest. Harris traveled through Pennsylvania, Northern Virginia and the southern parts of the Ohio territory in 1803 as far west as Marietta. Two years after his trip, Harris published his *Journal of a Tour into the Territory Northwest of the Allegheny Mountains*.<sup>53</sup> The 294 pages long publication contains his journal, including tables with exact information about the distances of his itinerary, thermometrical and meteorological observations, a 'Geographical and Historical Account of the State of Ohio', and an Appendix with documents and maps illustrating the exploration and the settlement of the Ohio territory. Harris dedicated the book to Rufus Putnam, the first Surveyor General of the USA, who together with Manasseh Cutler, Samuel Holden Parsons and Benjamin Tupper had established the Ohio Company in Boston on 3 March 1786. Whereas the journal entries contain personal observations and convey the romantic view of wilderness and freedom that was common at that time, the two other parts are

C O N T E N T S.

BOUNDARIES, quantity of land, &c.  
 Face of the country, soil, and productions.  
 Climate.  
 Minerals.  
 Rivers.  
 Fish.  
 Counties and Towns.  
 Navigation.  
 Exports.  
 Antiquities.  
 Curiosities.  
 Government.  
 History.  
 Indian Wars.

APPENDIX.

Letter to the Earl of Hillsborough on the  
 navigation of the Ohio.  
 Act of Congress forming the State.  
 Constitution of the State.  
 Account of the destruction of the Moravian  
 settlements on the Muskingum.  
 Wayne's treaty.

**Figure 3.** Contents of the geographical and historical account of the State of Ohio by Thaddeus Mason Harris.

written in the academic style and according to the scholarly standards and norms of the emerging sciences that also characterized Manasseh Cutler's advertising brochure. As an addendum to his journal, Harris published long tables with exact measurements and detailed descriptions of the historical development and geography of Ohio (Figure 3).

Like Cutler's text, Harris's narrative contains information about wild game, fish, the topography and the road system that is almost identical with the accounts given by James Smith. As in Manasseh Cutler's and John Jacob Eyerly's texts, many comments about the land, the roads traveled and towns visited, include remarks concerning climatic and environmental conditions and the 'healthiness' of the land. In contrast to Eyerly's experience five years earlier, Harris does not talk about any encounters with the Indigenous population. However, Harris is the first of our authors commenting on the environmental destruction accompanying the settlement of the Old North West.

We remarked, with regret and indignation, the wanton destruction of these noble forests. For more than fifty miles, to the west and north, the mountains were burning. This is done by the hunters, who set fire to the dry leaves and decayed fallen timber in the vallies, in order to thin the undergrowth, that they may traverse the woods with more ease in pursuit of game. But they defeat their own object; for the fires drive the moose, deer, and wild animals into the more northerly and westerly parts, and destroy the turkies, partridges, and quails, at this season on their nests, or just leading out their broods. An incalculable injury, too, is done to the woods, by preventing entirely the growth of the trees, many of which being on the acclivities and rocky fides of the mountains, leave only the most dreary and irrecoverable barrenness in their place.<sup>54</sup>

Like Cutler, Harris was a learned man and like Eyerly he had a close institutional relationship to the protestant church, however, without missionary impulses. Thaddeus Mason Harris attended Harvard College, graduating in 1787. He served as librarian of the Harvard College Library from 1791 until 1793 when he was ordained as Unitarian minister of the First Parish Church in Dorchester.<sup>55</sup> In 1806, he was elected Fellow of the American Academy of Arts and Sciences and in 1812 he became one of the founding members of the American Antiquarian Society. He received a Doctorate of Theological Studies from Harvard in 1813 and saw many of his sermons published in his lifetime. His most noted book was *A Dictionary of the Natural History of the Bible* first published in Boston in 1793, in which he combines his interest in theology and biology by writing a natural history of the 'earliest times' based on information retrieved from the Bible.<sup>56</sup> With the publication of his travel account in 1805, Harris intended to correct misleading information published in earlier reports:

The accounts of what has been usually called 'the Western Territory', which have as yet been published, are very brief, imperfect, and wrought up with many exaggerations. The author of this Geographical sketch of that part of it which now forms the State of Ohio, has been careful to make fair observations, and to collect correct information and he has endeavoured to give such a statement as will convey a just description of the region he visited. To many these particulars will be new, and it is hoped they will prove acceptable to all who may honor this work with a perusal to the Patriot, the true friend of America, they cannot fail of proving interesting. He will be pleased with being informed that enterprising emigrants are forming settlements far in the interior of the country, and converting the dreary wilderness into fruitful fields.<sup>57</sup>

The accomplishment of the first settlers in transforming 'wilderness into fruited plain' (Whitney) is one of Harris's objects of observation. In addition to information about

'good land' and 'good climate', his descriptions of the land include sketches about 'good', in the sense of 'civilized' ways of life at the settlement frontier. The existence of post offices, meetinghouses, newspapers and merchants are pinpointed as signs of civilization. Harris's description of Uniontown (Fayette County, PA) might serve as an example:

Uniontown is the shire town of the County. It is a very pleasant and thriving place, situated near Redstone Creek, and principally built upon one straight street, the side walks of which are neatly paved with large flat stones. It contains about one hundred and twenty houses, many of them well built, and some quite handsome. The public buildings are a meeting-house, and a stone Gaol. There is a printing office in the town which issues a weekly newspaper. Several manufactures are carried on in the place, and much business done in the mercantile line to very great advantage. Though the town has been settled but fifteen years, it is, next to Pittsburg and Wheeling, the most flourishing town through which we passed on the western side of the mountains. Near it are some valuable merchant-mills; and in the county are eighteen furnaces and iron works, and several distilleries.<sup>58</sup>

Harris's narrative and his opinions about the pioneer settlers are framed by puritan norms and ideals. He presents the industrious, sedentary life style of the non-slaveholding, small landowning, family farmer as an American settlement norm:

The industrious habits and neat improvements of the people on the west side of the river, are strikingly contrasted with those on the east. *Here*, in Ohio, they are intelligent, industrious, and thriving; *there*, on the back skirts of Virginia, ignorant, lazy, and poor. *Here*, the buildings are neat, though small, and furnished in many instances with brick chimnies and glass windows; *there*, the habitations are miserable cabins. *Here*, the grounds are laid out in a regular manner, and inclosed by strong posts and rails; *there*, the fields are surrounded by a rough zig-zag log fence. *Here*, are thrifty young apple orchards; *there*, the only fruit that is raised is the peach, *from which a good brandy is distilled!*<sup>59</sup>

This comparison of the civilized state of Ohio with the rather backward and uncivilized situation in Virginia is part of the emerging settler colonial discourse combining knowledge about the quality of land with assessments of the quality of the settlers. Land turns into 'bad' or 'good' land depending on the lifestyle and ethnic background of the settlers. Settlers who do not concentrate on farming but instead live the semi-sedentary life of hunters are depicted as 'rough' and 'savage'. Slaveholders and more recent emigrants from foreign countries are put into the same category. Hunters, slaveholders and new emigrants are discursively equated with the assumed uncivilized and barbarous state of the Indigenous population. 'Good land' is land settled by New England yeoman farmers:

I HAD often heard a degrading character of the BACK SETTLERS; and had now an opportunity of seeing it exhibited. The abundance of wild game allures them to be huntsmen. They not only find sport in this pursuit, but supply of provisions, together with considerable profit from the peltry. They neglect, of course, the cultivation of the land. They acquire rough and savage manners. Sloth and independence are prominent traits in their character; to indulge the former is their principal enjoyment, and to protect the latter their chief ambition.

Another cause of the difference may be that, in the back counties of Virginia, every planter depends upon his negroes for the cultivation of his lands; but in the State of Ohio, where slavery is not allowed, every farmer tills his ground himself. To all this may be added, that most of the 'Back-wood's men', as they are called, are emigrants from foreign countries, but the State of Ohio was settled by people from NEW-ENGLAND, THE REGION OF INDUSTRY, ECONOMY, AND STEADY HABITS.<sup>60</sup>

Living-up to the New England concept of civilization, Harris traveled in a horse-drawn carriage whenever possible. He only rode on horseback when the roads were so bad that a carriage could not pass. This might be one reason why his journal entries always also contain assessments of the road and trail system. He very often describes the roads as 'rugged', 'dreary', 'dangerous', 'strenuous' and as 'obstructed by the trees which had fallen across it'. Throughout most of his journey, Harris traveled on the meanwhile well-established roads cut for military purposes during the French and Indian War and during the Revolutionary War: the Glades Road, and the Forbes and Braddock Road. James Smith, our first witness, had helped to build the latter during the late 1750s. Nevertheless, the condition even of these well-established roads was highly problematic.<sup>61</sup> Harris also had to use small trails leading through the forest. In those cases, he relied on marked trees as road signs: 'Our course through the woods was directed by marked trees. As yet there is no road cut'.<sup>62</sup> Harris's account underlines what earlier reports had already pointed out: the accessibility of the land was at least as important for a successful settlement as was the quality of the land. Knowledge about the road and trail system was thus an intricate component of the knowledge about 'good' and 'bad' land.

### Topography and knowledge: cultural landscapes as contact zones of pidgin-knowledge systems

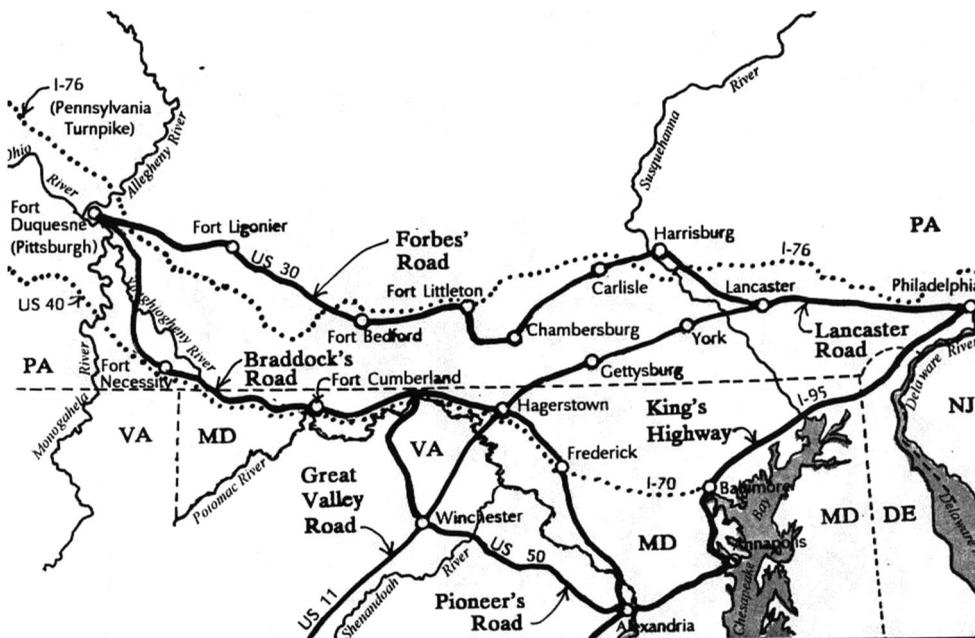
The exemplary analysis of these four texts demonstrates the development and functioning of a knowledge network, which served as knowledge broker, intergenerational knowledge transmitter and as instrument of creating epistemic authority. Knowledge acquired by members of this network from interactions and encounters with the Indigenous peoples was absorbed and amalgamated into the European knowledge sphere. Through transfer over time Indigenous knowledge eventually became an indistinguishable element of the Euro-American knowledge system. The appropriation and adaptation of Indigenous knowledge inscribed in the landscape in form of a complex road and trail system was perhaps the most conspicuous element of the broad variety of knowledge transfers characterizing the knowledge system of settler colonialism in the Old Northwest. Indigenous cultural landscapes and its trail-related resources were used first by the military, then by explorers and surveyors, and finally also the early settlers. Early road builders followed established 'Indian' routes or buffalo traces and broadened these path systems so that wagons with military apparel could use them. The appropriation and integration of Indigenous trail-related resources into Western communication systems also produced a rather high and long-lasting impact, if we consider the fact that many of the appropriated Indigenous trails later became American highways.<sup>63</sup>

Already before the independence of the USA, for military and economic reasons, George Washington was actively engaged in the development of a road system connecting the 13 Colonies with the land west of the Great Appalachian Valley. In one of his first missions during the French and Indian War, he followed 'Indian' trails to Fort Necessity where one of the first battles of this war took place in 1754. One year later, in 1755 General Edward Braddock took the same route for his military campaign against the French. His military expedition was accompanied by the construction of the Virginia road to present-day Pittsburgh, at that time the site of Fort Duquesne established by the French in 1754 at the convergence point of the Allegheny and Monogahela rivers.

Moreover, Braddock had urged Pennsylvania to construct simultaneously a northern road to Ohio to facilitate his military campaigns. James Smith was involved in the construction of this road, which also followed 'Indian' trails.

James Smith and George Washington who both participated in Braddock's campaign, although in different functions, witnessed the defeat of Braddock's army in the Battle of Monongahela and the flight of the Pennsylvanian road builders back to their eastern settlement. As mentioned above, Smith was taken captive by Delawares during this campaign. Only three years later was the Northern Pennsylvanian road completed by John Forbes. This road was much shorter than the Virginia road laid out by Braddock, and became the core military road to Ohio and the West. In 1758, Washington eventually led a regiment to Fort Duquesne using this shorter Pennsylvanian road to the Ohio (Figure 4).<sup>64</sup>

Not only the military but also trading companies built roads and trails into the back-country of the 13 Colonies. The Transylvania Trading Company, for example, constructed a road from Virginia to Kentucky and the Ohio Company financed the construction of a road from the Potomac to the Ohio. Both of these roads followed 'Indian' trails and buffalo traces most of the way. And the famous 'Zane's Trace' (Figure 1), which was the usual route from Maysville, Kentucky to Chilicothe, Ohio, from 1797 until about 1820, covering a distance of something over 200 miles, went partly along the route of an old 'Indian' thoroughfare.<sup>65</sup> In laying out this route, road builder and land speculator Ebenezer Zane relied on his Indian guide Tomepomehala and his brother Jonathan's knowledge of the Ohio country.<sup>66</sup> Jonathan Zane had traveled through a considerable portion of eastern Ohio and served as scout and guide during several military expeditions against the



**Figure 4.** Forbes' and Braddock's Road 1755–1758.

Source: rootsweb, Index of firebird maps (<http://freepages.genealogy.rootsweb.ancestry.com/~firebird/Maps/>) accessed April 24, 2015.

'Indians' as far north as the Sandusky River Valley. The Zane brothers, again, advised Manasseh Cutler to purchase land for settlement on the Muskingum and Licking Rivers.<sup>67</sup> Zane's Trace became an important route for pioneer settlers in Ohio.

Whereas knowledge about 'good land' and 'bad land' was more or less adapted Euro-American knowledge paired with observations about the usage of land by the Indigenous peoples, be it hunting or farming or fishing, knowledge about routes and paths into the territory resulted from the spatially imprinted Indigenous communication systems. 'Indian' routes or trails and buffalo traces had transformed the dense and almost impenetrable virgin forest<sup>68</sup> into a cultural landscape containing most precious resources, namely knowledge about how to penetrate the wilderness in order to access the desired 'good land'. This included not only visible paths but also an Indigenous sign system. Indigenous peoples used, for example, tree paintings as road markers. These long-lasting images and signs continued to be utilized by the first generation of settlers entering the country.<sup>69</sup> Even travelers of the early nineteenth century like Thaddeus Mason Harris relied on these tree paintings, as we have seen above.

Many of the early roads were indeed merely paths cut through the forest leading from one fording-place to another. Still in 1803, when Thaddeus Mason Harris crossed the Alleghenies and traveled to Ohio using the Braddock Road, this road was 'very rugged and difficult over the mountains'. After heavy rains, Harris underlined, 'it is almost impassable'.<sup>70</sup> James Smith and Jacob Eyerly also complained about the state of the paths and trails and the strenuousness of a journey with pack-horses. Eyerly, for example, talked about 'very crooked paths', resembling more an 'almost indistinguishable footpath' and added: 'the heavy rains on the tiny runs had made the ground so soft, wherever there was good soil, that the horse with its pack sank in up to its belly and had to be pulled out'.<sup>71</sup> The poor conditions of the paths and roads to Ohio was a point of discussion and a concern of potential settlers. Manasseh Cutler's assurance that Pennsylvania had improved this road just after the Revolutionary War was without doubt also a reaction to the prevailing anxiety about the dangers of traveling to Ohio. Traveling on sometimes indistinguishable footpaths was dangerous for settlers and horses alike. Besides the danger to sink into the mud, as described by Eyerly, travelers also got lost, because they did not recognize the right road or the correct turning point. Even James Smith, after several years of traveling around with his 'Indian' family in a clearly defined territory, got lost while hunting on his own. Hence, in all our cases we see that the transfer and appropriation of Indigenous knowledge about routes and trails required the ability to 'read' the landscape and the environment. The ability to recognize Indigenous trails and routes also depended on knowledge gained through practical experience with the native landscape. Euro-American travelers needed practical knowledge about the character of the environment and a certain acquaintance with the landscape in order to be able to make use of the appropriated Indigenous communication system. Without this practical knowledge, the appropriation and usage of Indigenous trail-related knowledge resources very often failed.

## Conclusion

Through the lens of perceptions and descriptions of 'good' and 'bad' land in four exemplary travel accounts written in the late eighteenth and early nineteenth centuries, this paper presents a glimpse into the complex settler colonial knowledge system of the

Old Northwest. The analysis gives special attention to the development, epistemic constitution and entanglement of the European knowledge system with the Indigenous knowledge systems. With its focus on the ecology and topography of knowledge networks and knowledge transfer between European and Indigenous resources the article pays tribute for one to the current debate about decolonizing Indigenous knowledge, and secondly to the topographical turn and its concentration on non-discourse oriented postcolonial approaches.

The analysis was able to show that the description of land follows the pattern established by contemporary scientific knowledge produced by early geographers, surveyors or botanists who were traveling and exploring the country, painting maps, describing raw material and prospects for trade and whose publications were widely read. Agricultural knowledge published in learned serial publications complemented the information. Our authors adapted this kind of 'European' scientific knowledge and used it as a foil for the description of their own experience and observations. According to the adapted European standard narrative the quality of soil was associated with the composition and the character of the forest and the trees growing in this forest. Our authors were part of a network of knowledge consumers and knowledge producers. As members of this network they participated in the establishment of an epistemic canon about 'good' and 'bad' land. The truthfulness of the information provided by their accounts was attested to by members of this network who had special authority, for example as government agent or as scientist. Knowledge was transferred intergenerationally within this network.

In the adaptation of European scientific knowledge the individual texts show astonishing similarities relating to the textual and narrative descriptions of 'good' and 'bad' land. The accounts are based on a common biological and geographical reference system that pinpoints specific trees as signs of good soil and uses rivers, 'Indian' trails and portages, 'Indian' towns and forts as landmarks. The descriptions of roads, local landscapes, or the productive qualities of the lands are often characterized by almost identical style and wording. Last but not least, our travelers all used more or less the same road system into the Ohio territory. Most of these roads, as we have seen, followed native trails and paths. Whereas knowledge about the quality of land was adapted European knowledge, knowledge about the accessibility of the land and its connection to early trading routes, that is, knowledge about where to go and how to get there, was very much appropriated trail-related Indigenous knowledge. This specific Indigenous knowledge was embedded in and part of the Indigenous cultural landscape. Hence, in contrast to the text-related knowledge transfer within different European knowledge systems determining the way 'good' or 'bad' land was identified and classified, the appropriation and transfer of this spatially embedded trail-related Indigenous knowledge were based very much on environmentally mediated information. Moreover, the transfer and appropriation of this specific Indigenous knowledge demanded a certain set of pre-knowledges and experiences. Only an experienced Euro-American observer of the environment could read and interpret the spatial information presented by the Indigenous landscape. Without a certain practical acquaintance with the flora, fauna, climate and topography, reading the environment and recognizing the spatially embedded knowledge resources was often impossible or produced misunderstandings and misinformation.

Euro-American pre-knowledges were usually acquired through observation of Indigenous practices or through participating in these practices. Misunderstandings resulting from a lack of practical experience with the ecology of Indigenous communication and settlement systems resulting in failed knowledge transfer could be life-threatening for the Euro-American traveler. Getting lost in the woods could mean starvation and a lack of shelter against rain and the low temperatures during the night. Not finding the right way to the next log cabin could, however, also end up in a direct confrontation with the Indigenous peoples still living in the territory. As owners and producers of trail-related information resources, they occupied a hegemonic knowledge position that they were able to use in their resistance against the intrusion of Euro-Americans on their land. Furthermore, as many ill-fated military campaigns during the French and Indian War and the Revolutionary War have shown, the appropriation of trail-related Indigenous knowledge and the usage of the Indigenous road system could also produce highly problematic repercussions. It increased the danger of violent contacts with the Indigenous peoples who knew the country and who had created the cultural landscape and thus were able to fight the intruders with techniques that very much used the landscape and the environment as shield and weapon.

At the turn of the eighteenth and nineteenth centuries, an additional feature entered the discourse about 'good' and 'bad' land. The quality of land was no longer only determined by scientific standards but also associated with the quality of the settlers living on the land. 'Good land' was land settled by New England yeoman farmers. With this new element in the discourse about land, the lingering American obsession with individual land ownership as a means to attain general equality and prosperity entered the settler colonial knowledge system. Ecological knowledge about land turned into socio-ecological knowledge laying the foundation for future political developments in the field of 'Indian'-White relations, White Anglo-Saxon Protestant (WASP) xenophobia and hostility to foreigners and the concomitant exclusionary practices of nineteenth-century Americanization policies.

## Notes

1. For analysis of land distribution and settlement practices in Ohio, including detailed maps of land ownership based on the Geographic Information System (GIS) mapping of information retrieved from surveyor books and records see: Hanno Scheerer, 'Settlers, Surveyors, Speculators, and the State: Struggles for Control over Land in Ohio's Virginia Military District, 1776–1810' (Dr phil. diss., University of Trier History Department, 2014).
2. Ronald R. Rindfuss et al., 'Frontier Land Use Change: Synthesis, Challenges, and Next Steps', *Annals of the Association of American Geographers* 97 (2007): 739–54, here 740.
3. See Robert W. McCluggage, 'The Pioneer Squatter', *Illinois Historical Journal* 82, no. 1 (1989): 47–54; John R. Van Atta, "'A Lawless Rabble": Henry Clay and the Cultural Politics of Squatters' Rights, 1832–1841', *Journal of the Early Republic* 28, no. 3 (2008): 337–78; Malcolm J. Rohrbough, *The Land Office Business; the Settlement and Administration of American Public Lands, 1789–1837* (New York: Oxford University Press, 1968); Stephen Aron, 'Pioneers and Profiteers: Land Speculation and the Homestead Ethic in Frontier Kentucky', *The Western Historical Quarterly* 23, no. 2 (1992): 179–98.
4. Paul. A. W. Wallace, 'Jacob Eyerly's Journal, 1794: The Survey of Moravian Lands in the Erie Triangle', *The Western Pennsylvania Historical Magazine* 45, no. 1 (1962): 5–23, here 17.

5. For the analysis of the impact of ecological factors on the settlement and the environmental consequences of European colonialism in North America see Alfred W. Crosby, *The Columbian Exchange. Biological and Cultural Consequences of 1492* (Westport, CT: Greenwood, 1972); Alfred W. Crosby, *Ecological Imperialism. The Biological Expansion of Europe, 900–1900* (Cambridge: Cambridge University Press, 1986); William Cronon, *Changes in the Land. Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983); Gordon G. Whitney, *From Coastal Wilderness to Fruited Plain. A History of Environmental Change in Temperate North America 1500 to the Present* (Cambridge: Cambridge University Press, 1994); Virginia DeJohn Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America* (New York: Oxford University Press, 2004); Londa L. Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, MA: Harvard University Press, 2004).
6. Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation* (London: Routledge, 1992).
7. Richard White, *The Middle Ground. Indians, Empires, and Republics in the Great Lakes Region, 1650–1815* (Cambridge: Cambridge University Press, 1991).
8. For a list of travel literature published between 1790 and 1865 see Frank Freidel, Richard K. Showman, and Oscar Handlin, *Harvard Guide to American History*, rev. ed. (Cambridge: Belknap Press of Harvard University Press, 1974), 141–50. See also Newton Dennison Mereness, ed., *Travels in the American Colonies* (Cranbury, NJ: Scholar's Bookshelf, 2006).
9. The Delawares or Lenapes have appropriated the external, colonial designation of 'tribe' and 'Indian' in the official representation of their nation on the internet. See: <http://delawaretribe.org/> (accessed April 24, 2015). Throughout the text I will use the colonial concepts of 'tribe' and 'Indian' in quotation marks in order to mark the fact that these terms stem from Western colonial concepts.
10. James H. Rodabaugh, 'American Indian Ethnohistorical Materials in Ohio', *Ethnohistory* 8, no. 3 (1961): 242–55, here 246.
11. Wallace, *Jacob Eyerly's Journal*, 21.
12. Ralph W. Dexter, 'Early Descriptions of the Natural Environment of Ohio (1788): Science or Propaganda?', *Environmental Review: ER* 5, no. 2 (1981): 76–8.
13. Edward W. Said, *Culture and Imperialism* (London: Vintage, 1994), 59.
14. *Ibid.*, 61.
15. For a discussion of the concept of 'knowledge' from a postcolonial perspective see: Eva Bischoff and Ursula Lehmkuhl, 'Provincializing the United States: Postcolonial Perspectives on North American History', in *Provincializing the United States: Colonialism, Decolonization, and (Post)Colonial Governance in Transnational Perspective*, eds. Ursula Lehmkuhl, Eva Bischoff, and Norbert Finzsch (Heidelberg: Winter Verlag, 2014), 5–29.
16. See on this debate: Leanne R. Simpson, 'Anticolonial Strategies for the Recovery and Maintenance of Indigenous Knowledge', *American Indian Quarterly* 28, no. 3/4 (2004): 373–84; Ray Barnhardt and Angayuqaq Oscar Kawagley, 'Indigenous Knowledge Systems and Alaska Native Ways of Knowing', *Anthropology & Education Quarterly* 36, no. 1 (2005), 8–23 as well as the proceedings of the Annual Conference of the Association of Canadian Studies in German-speaking Countries (GKS) 2014 on 'Indigenous Knowledges and Academia' edited by Kerstin Knopf (Augsburg: Wissner Verlag, forthcoming).
17. See e.g. the Winter 2003 special issue of *Cultural Survival Quarterly* on Indigenous education. For a definition of Indigenous or traditional knowledge see: Stephen A. Hansen and Justin W. VanFleet, eds., *Traditional Knowledge and Intellectual Property: A Handbook on Issues and Options for Traditional Knowledge Holders in Protecting Their Intellectual Property and Maintaining Biological Diversity* (Washington, DC: American Association for the Advancement of Science (AAAS) Science and Human Rights Program).
18. See among others: Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto: University of Toronto Press, 2009); Rauna Johanna Kuokkanen, *Reshaping the University: Responsibility, Indigenous Epistemes, and the Logic of the Gift* (Vancouver: UBC Press, 2007); Vine Deloria, *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact* (New York: Scribner, 1995); Louise Grenier, *Working with Indigenous Knowledge: A Guide for Researchers* (Ottawa: International Development Research Centre, 1998); Devon

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19. Nicole St-Onge, Carolyn Podruchny, and Brenda Macdougall eds., *Contours of a People: Metis Family, Mobility, and History, New Directions in Native American Studies V 6* (Norman: University of Oklahoma Press, 2012); see also: Carolyn Podruchny, *Making the Voyageur World: Travelers and Traders in the North American Fur Trade* (Lincoln: University of Nebraska Press, 2006); Laura Lynn Peers and Carolyn Podruchny eds., *Gathering Places: Aboriginal and Fur Trade Histories* (Vancouver: UBC Press, 2010).
  20. Candace Savage, *A Geography of Blood: Unearthing Memory from a Prairie Landscape* (Vancouver, Toronto, Berkeley: Greystone, 2012); Keith H. Basso, *Wisdom Sits in Places: Landscape and Language among the Western Apache* (Albuquerque: University of New Mexico Press, 1996).
  21. Sigrid Weigel, 'Zum "Topographical Turn". Kartographie, Topographie und Raumkonzepte in den Kulturwissenschaften', *KulturPoetik* 2, no. 2 (2002): 151–65.
  22. Edward W. Soja, *Postmodern Geographies: The Reassertion of Space in Critical Social Theory* (London: Verso, 1989).
  23. Andrew Sluyter, 'Colonialism and Landscape in the Americas: Material/Conceptual Transformations and Continuing Consequences', *Annals of the Association of American Geographers* 91, no. 2 (2001): 410–28, here 415.
  24. For a description of this campaign see William Smith et al., *An Historical Account of the Expedition against the Ohio Indians, in the Year 1764: Under the Command of Henry Bouquet, Esq., Colonel of Foot, and Now Brigadier General in America: Including His Transactions with the Indians, Relative to the Delivery of Their Prisoners, and the Preliminaries of Peace: With an Introductory Account of the Preceding Campaign, and Battle at Bushy-Run: To Which Are Annexed Military Papers, Containing Reflections on the War with the Savages, a Method of Forming Frontier Settlements, Some Account of the Indian Country, with a List of Nations, Fighting Men, Towns, Distances and Different Routs: The Whole Illustrated with a Map and Copper-Plates* (Philadelphia: Printed and sold by William Bradford ... 1765).
  25. James Smith, *An Account of the Remarkable Occurrences in the Life and Travels of Colonel James Smith (New a Citizen of Bourbon County, Kentucky: During His Captivity with the Indians, in the Years 1755, '56, '57, '58, & '59)* (Lexington: Printed by John Bradford, 1799).
  26. Smith, *Account of the Remarkable Occurrences*, 13–4.
  27. *Ibid.*, 21.
  28. *Ibid.*, 25. For further comments on the land see pages 26–9, 38–46, 55, 73, 80, 85, 86, 99–100.
  29. Donald B. Marti, 'Agricultural Journalism and the Diffusion of Knowledge: The First Half-Century in America', *Agricultural History* 54, no. 1 (1980), 28–37.
  30. Harald Fischer-Tiné, *Pidgin-Knowledge. Wissen und Kolonialismus* (Zürich: Diaphanes, 2013).
  31. Smith, *An Account of the Remarkable Occurrences*, 4.
  32. William Cronon, *Changes in the Land. Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983), xv.
  33. Manasseh Cutler, *An Explanation of the Map Which Delineates That Part of the Federal Lands, Comprehended between Pennsylvania West Line, the Rivers Ohio and Sioto, and Lake Erie; Confirmed to the United States by Sundry Tribes of Indians, in the Treaties of 1784 and 1786, and Now Ready for Settlement* (Salem: Dabney and Cushing, 1787).
  34. Cutler, *An Explanation of the Map*, 3.
  35. *Ibid.*, 10, 12.
  36. On the edition of Cutlers work by Robert Clarke see Lee Nathaniel Newcomer, 'Manasseh Cutler's Writings: A Note on Editorial Practice', *The Mississippi Valley Historical Review* 47, no. 1 (1960): 88–101, here 88 ff. For further biographical information see James Ellis Humphrey, 'Manasseh Cutler', *The American Naturalist* 32, no. 374 (1898): 75–80.
  37. Ralph W. Dexter, 'Early Descriptions of the Natural Environment of Ohio (1788): Science or Propaganda?', *Environmental Review: ER* 5, no. 2 (1981): 76–78.

38. Thaddeus Mason Harris, *The Journal of a Tour into the Territory Northwest of the Alleghany Mountains; Made in the Spring of the Year 1803* (Boston, MA: Printed by Manning & Loring, 1805), 129.
39. Scheerer, *Settlers, Surveyors, Speculators*.
40. Cutler, *An Explanation of the Map*, 14.
41. Scheerer, *Settlers, Surveyors, Speculators*, 79.
42. Andrew R. L. Cayton, *The Frontier Republic: Ideology and Politics in the Ohio Country, 1780–1825* (Kent, OH: Kent State University Press, 1986), 3.
43. Scheerer, *Settlers, Surveyors, Speculators*, 80.
44. For an overview over the Gnadenhutten massacre and its treatment by the responsible politicians and through historical analysis see John P. Bowes, 'The Gnadenhutten Effect: Moravian Converts and the Search for Safety in the Canadian Borderlands', *Michigan Historical Review* 34, no. 1 (2008): 101–17. See also Earl P. Olmstead, *Blackcoats among the Delaware: David Zeisberger on the Ohio Frontier* (Kent, OH: Kent State University Press, 1991).
45. For an analysis of the travels of John Heckewelder see: Paul A. W. Wallace, *The Travels of John Heckewelder in Frontier America* (Pittsburgh, PA: University of Pittsburgh Press, 1985).
46. Wallace, *Jacob Eyerly's Journal*, 20–1.
47. The manuscript was eventually published in 1962. Wallace, *Jacob Eyerly's Journal*.
48. Wallace, *Jacob Eyerly's Journal*, 15.
49. *Ibid.*, 18. For this kind of Indian hospitality see also Smith, *An Account of the Remarkable Occurrences*, 42, 44.
50. Wallace, *Jacob Eyerly's Journal*, 20.
51. Although the Moravians had contacts with many Indigenous peoples, they did most of their work among the Delawares. Their work lasted until 1900, for a total of over one hundred fifty years. Perhaps the most interesting aspect of the mission is that the Moravians were always on the scene so early. Consequently, the Moravian missionaries were frequently the first white settlers in the places where they located, and their records are often the oldest existent records from those places. Edward Langton, *History of the Moravian Church: The Story of the First International Protestant Church* (London: Allen & Unwin, 1956); J. Taylor Hamilton, *A History of the Church Known as the Moravian Church, or the Unitas Fratrum, or the Unity of the Brethren, During the Eighteenth and Nineteenth Centuries* (New York: AMS Press, 1971).
52. Smith, *An Account of the Remarkable Occurrences*, 25.
53. Harris, *The Journal of a Tour into the Territory Northwest*.
54. *Ibid.*, 22–3.
55. Harris's son Thaddeus William Harris also served as a librarian at Harvard and was one of the leading American naturalists in the first half of the nineteenth century. See entry on the Harris family by Noah Sheola, in: The Boston Athenaeum <http://www.bostonathenaeum.org/library/book-recommendations/athenaeum-authors/harris-family> (accessed April 9, 2015).
56. This book witnessed several editions. A first revised edition was published in 1824 and a second one in 1833. There exist several digitized versions of the 1833 publication freely accessible. See, for example, <https://play.google.com/books/reader?id=PXJLAAAIAAJ&printsec=frontcover&output=reader&hl=de> (accessed April 9, 2015).
57. Thaddeus Mason Harris, *The Journal of a Tour into the Territory Northwest of the Alleghany Mountains; Made in the Spring of the Year 1803* (Boston, MA: Printed by Manning & Loring, 1805), 89. Martha Pallante argues that this journal, like Jonathan Carver's 'Travels Through the Interior Parts of North America' and Jedidiah Morse's 'American Gazeteer', was literary propaganda 'aimed at enticing immigrants into settling the region'. Martha Pallante, 'The Trek West: Early Travel Narratives and Perceptions of the Frontier', *Michigan Historical Review* 21, no. 1 (1995), 83–99, here 87–8. I could, however, not find a direct connection to propaganda.
58. Harris, *The Journal of a Tour into the Territory Northwest*, 66.
59. *Ibid.*, 58.
60. *Ibid.*, 59.
61. *Ibid.*, 23–4.
62. *Ibid.*, 60.

63. Another Indian legacy is the great number of Indian place-names resulting from the fact that surveyors often were assisted by Indigenous scouts who identified places by their native names. See for example William Cornelius Reichel, ed., *Names Which the Lenni Lennape or Delaware Indians Gave to Rivers, Streams and Localities, within the States of Pennsylvania, New Jersey, Maryland, and Virginia, with Their Significations, Based on a Manuscript from John Heckewelder* (Bethlehem PA: H.T. Clauder, printer, 1872). For a map with Indian villages in Ohio, Pennsylvania, and New York 1764–1794 see Hermann Wellenreuther and Carola Wessel eds., *The Moravian Mission Diaries of David Zeisberger, 1771–1781, Max Kade German-American Research Institute Series* (University Park: Pennsylvania State University Press, 2005). This edition also contains an index of place and river names and other geographical terms. See also Mildred M. Walmsley and Mary Lou Conlin, *The Heckewelder Map, 1796, Western Reserve Historical Society Publication* (Cleveland: Western Reserve Historical Society; distributed by the Press of Case Western Reserve University, 1968).
64. On the involvement of George Washington in land speculation and squatting see: Stephen Aron, 'Pioneers and Profiteers: Land Speculation and the Homestead Ethic in Frontier Kentucky', *The Western Historical Quarterly* 23, no. 2 (1992): 179–98.
65. Paul A. W. Wallace, 'Historic Indian Paths of Pennsylvania', *The Pennsylvania Magazine of History and Biography* 76, no. 4 (1952), 411–39, here 414.
66. [http://www.ohiogenealogyexpress.com/fairfield/fairfieldco\\_pioneerfamilies\\_9.htm](http://www.ohiogenealogyexpress.com/fairfield/fairfieldco_pioneerfamilies_9.htm) (accessed April 24, 2015).
67. Clement Luther Martzloff, *Zane's Trace* (Columbus, 1904).
68. Gordon G. Whitney, *From Coastal Wilderness to Fruited Plain. A History of Environmental Change in Temperate North America 1500 to the Present* (Cambridge: Cambridge University Press, 1994), 174–5.
69. Wallace, *Historic Indian Paths of Pennsylvania*. A good example for Indian tree paintings used as road markers is the 'Painted Line' in Bradford County, Pennsylvania.
70. Harris, *The Journal of a Tour into the Territory Northwest*, 24.
71. Wallace, *Jacob Eyerly's Journal*, 16.

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