

**AN ABSTRACT OF THE THESIS OF**

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Abstract Approved: \_\_\_\_\_

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The proper way to order knowledge and find truth about the natural world in the eighteenth century lay in one's ability to correctly learn and employ the quality of reason. While all had the right to seek reason, only a privileged few achieved its proper use, creating an intellectual elite of white, educated males. Many groups were not considered to possess reason, with each group's exclusion explained differently. In conjunction with the supremacy of reason, voyages of discovery were setting out to discover new knowledge. They brought back news and accounts of indigenous Americans that presented these peoples as one such unreasonable group. Such travel accounts, especially those of the 1735 geodesic expedition to Peru, would become sources for a broader racial discourse that took place within the reading public and among philosophes in the eighteenth century. This racial discourse of recycled ideas and preconceptions of indigenous peoples reveals a reflexive loop of information that portrayed indigenous peoples as unreasonable due to climatic effect and a lower level of development.

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Reason as Race: Enlightenment Voyages of Discovery and their Effect on 18<sup>th</sup> Century

Racial Discourse

By

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## Table of Contents

Introduction.....	2
Reason in the Enlightenment.....	5
Enlightenment Racial Discourse.....	15
Scientific voyages in the Age of Reason.....	27
Case Study: The La Condamine/Ulloa and Juan Expedition.....	30
Perceptions of Race in the published accounts of La Condamine.....	37
Perceptions of Race in the published accounts of Jorge Juan and Antonio de Ulloa.....	46
Placing La Condamine and Juan and Ulloa within Enlightenment Racial Discourse.....	52
La Condamine and Juan and Ulloa in the public reading sphere.....	58
Conclusions.....	67
Bibliography.....	71

## Introduction

While European nations were expanding overseas in the sixteenth and seventeenth centuries, they came into increased contact with indigenous peoples very different from themselves. Well before this period, Europe had begun to redefine itself in terms of an expanded view of humanity that somehow had to include peoples of not only different skin tones, religions, and languages, but also of different patterns of settlement and levels of technology. As the voyages of conquest of the sixteenth and seventeenth centuries became voyages of scientific discovery in the long eighteenth century, new tribes and groups continued to be contacted, but Europeans met such people with a preconceived “ideological line,” which presupposed the superiority of European peoples.<sup>1</sup> As Hof explains, “The Enlightenment encountered a world conquered by Europeans.”<sup>2</sup> Those who peered into the interiors of the Americas did so with conceptions framed by assumptions of environmental determinism and progressive human history, from which they concluded that the indigenous person lacked the capacity to reason on the same level as Europeans.<sup>3</sup> This evaluation reinforced views that philosophes already possessed of their own superior virtues, which assumed indigenous peoples to be marginal or peripheral. As Butterwick et al. explain, “Peripheries, therefore, can be spatial and temporal but they also relate to the networks between people and institutions, and to hierarchies of values.”<sup>4</sup>

Exactly how such peripheral status was ascribed to certain groups is what I hope to investigate in this study. The Enlightenment was a time of intellectual collaboration, yet it was also a time when elites distinguished among people based on the ways they expressed their ideas. A stratification of peoples that was particularly notable during the Enlightenment was the way in which racial difference was explained. The conversation about racial difference, especially with regard to indigenous Americans, was affected by published accounts of the scientific voyages of discovery that supplied new information

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<sup>1</sup> Peter Hulme and Ludmilla Jordanova, eds., *The Enlightenment and its Shadows* (London: Routledge, 1990), 7.

<sup>2</sup> Ulrich Im Hof, *La Europa de la Ilustración* (Barcelona: Grupo Grijalbe-Mondadori, 1993), translation made by author, 189.

<sup>3</sup> Hulme and Jordanova, 6-7.

<sup>4</sup> Richard Butterwick, Simon Davies, and Gabriel Sánchez Espinosa, eds., *Peripheries of the Enlightenment* (Oxford: Voltaire Foundation, 2008), 8.

about peoples who lived on the edge of the European consciousness. Through an examination of these travel accounts, and an investigation of how these works connected to the development of a wider racial discourse, it is possible to see a history of “otherness” that reverberates to this day. This study, to use cultural historian Peter Burke’s words, is an attempt to bring the “language of the past into that of the present, from the concepts of contemporaries into those of historians and their readers. Its aim is to make the ‘otherness’ of the past both visible and intelligible.”<sup>5</sup> Such efforts to understand past attitudes are important because we live in a world shaped by the Enlightenment. As Butterwick et al. explain, “The question arises of whether it is possible, or indeed desirable, to isolate the Enlightenment from its influence.”<sup>6</sup> We cannot argue that the racial categories of the Enlightenment are a direct cause of modern racism; it is nonetheless vital to understand how racial difference was perceived and presented in the eighteenth century in order to understand the origins of many of our modern beliefs.

This study examines the flow of ideas between Enlightenment writers and readers in order to understand the social construction of racial discourse that both framed and were framed by travel accounts of the Southern regions of the New World. In order to understand how indigenous Americans were observed and described to a European reading public, it is necessary to explore Enlightenment ideology for the limits of its inclusivity and the degree to which reason, both as a human capacity and method of understanding, defined who was to be included as participants in the Enlightenment project. The study begins with a broad overview of reason within the Enlightenment, and then moves to a case study of the 1735 Peruvian geodesic expedition to see how racial discourse was constructed and assimilated by both authors and readers. From this investigation, it is evident that the travel accounts formed a reflexive loop of perceptions that shaped, and were simultaneously shaped by, the greater racial discourse of the Enlightenment.<sup>7</sup>

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<sup>5</sup> Peter Burke, *Varieties of Cultural History*, (Cambridge: Polity Press, 1997), 193.

<sup>6</sup> Butterwick, et al., 4.

<sup>7</sup> Adrian Johns, *The Nature of the Book* (Chicago: University of Chicago Press, 1998), 47.

It is important before I begin my study to clarify a few terms that will be used throughout the thesis. Many scholars place the Enlightenment within the eighteenth century, with particular emphasis on the period between 1740 and 1780.<sup>8</sup> While these years encompass the period of most intense philosophical output, it leaves scholars with truncated bookends for a movement that cannot be neatly contained within forty years, much less one century. Some scholars have preferred to end the Age of Enlightenment with the tumult of the French Revolution and the Terror (1789-1794).<sup>9</sup> However, to end the Enlightenment with a French political event denies its intellectual continuities and ignores developments that persisted elsewhere in Europe and North America. Perhaps, if we define it as the rise and acceptance of a new corpus of ideas, the Enlightenment is better understood in terms of the long eighteenth century, which extends from the late seventeenth century until the rise of Romanticism in the early nineteenth century.<sup>10</sup>

Though there was a dramatic reordering of economic, imperial, political, and intellectual norms on a global scale during the course of the long eighteenth century, the majority of the writers and the focus of the Enlightenment's intellectual development centered on Europe, especially France.<sup>11</sup> In this paper, philosophes will refer to academicians and participants in the Enlightenment project from all nationalities, not just France. To further clarify, the Enlightenment project refers to intellectual output during the long eighteenth century that appeared in published works, in personal correspondence, and

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<sup>8</sup>See Dorinda Outram, *Panorama of the Enlightenment* (Los Angeles: J. Paul Getty Museum, 2006), chapter 1.

<sup>9</sup>For example, see Isser Woloch, *Eighteenth-Century Europe: Tradition and Progress, 1715-1789* (New York: Norton Publishing, 1982).

<sup>10</sup>Birgit Tautz, *Reading and Seeing Ethnic Differences in the Enlightenment* (New York: Palgrave MacMillan, 2007), 2. Tautz defines the long 18<sup>th</sup> century as the 150 years from 1680-1830, with which many scholars generally agree. Gustave Lanson and his students solidified the long 18<sup>th</sup> century as a more apt description of the Enlightenment time period during the first half of the 20<sup>th</sup> century, although scholars have since continued to debate the actual periodization of Enlightenment. See Paul Hazard, *The European Mind 1680-1715* (London: Penguin, 1973). The authors of the interdisciplinary lectures on the Enlightenment from the University of Essex also preferred the long 18<sup>th</sup> century as a way to combine art history, literature, and political ideology into a more synthetic period focused on texts. See Hulme and Jordanova, 15. See also Outram and Isaac Kramnick, *The Portable Enlightenment Reader* (New York: Penguin Books, 1995).

<sup>11</sup>Hulme and Jordanova, 2; Feldman, 7. For a discussion on the extent and precision of the Enlightenment as a movement see Norman Hampson, *The Enlightenment* (Harmondsworth, UK: Penguin Press, 1968) and L. G. Crocker, "Introduction," in *The Blackwell Companion to the Enlightenment* (Oxford: Blackwell Publishing, 1991).

in academic presentations. The number of subjects that were touched upon by those in the Enlightenment project was staggering, but most issues were written about from a specific reference point based on a belief in the importance of reason, as will be explained in the first section of this paper. One of the major areas of scholarly interest during the Enlightenment was the rise of the new sciences, or natural philosophy as the subject was commonly called. Both of these terms will be utilized in this paper.

### **Reason in the Enlightenment**

After hundreds of years during which religious thought dominated scholarly life, the Scientific Revolution of the seventeenth century ushered in a new way of ordering thought based on the observation and empirical evidence of nature.<sup>12</sup> This is not to say that religion became unimportant in the Enlightenment or that science in any way “defeated” religion to dominate intellectual discourse. Rather, religion remained a major issue both in the Scientific Revolution of the seventeenth century and during the Enlightenment.<sup>13</sup> Religion and science have long been intertwined in complex ways that defy simple definition, but from the seventeenth century onward there was a growing questioning of prior authority, of the scholastic philosophy of the Middle Ages, and an increased preference for experimentation and reasoning.<sup>14</sup> The major figures in the Enlightenment project “were by no stretch of the imagination political revolutionaries, but they have nevertheless been pilloried for creating a climate of intellectual distrust for traditional authority.”<sup>15</sup>

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<sup>12</sup> John Hedley Brooke, "Natural Theology," in *Science & Religion*, ed. Gary B. Ferngren (Baltimore: The John Hopkins University Press, 2002), 166.

<sup>13</sup> For an example of the degree to which religion and empiricism could be employed by one individual, Isaac Newton, see Richard Westfall, "Isaac Newton," in *Science & Religion*, ed. Gary B. Ferngren (Baltimore: The John Hopkins University Press, 2002), 153-162; see also Isaac Newton, "The Argument for a Deity," in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 96-100. See also David B. Wilson, "The Historiography of Science and Religion," in *Science & Religion*, ed. Gary B. Ferngren (Baltimore: The John Hopkins University Press, 2002), 24; John Hedley Brooke, *Science and Religion: Some Historical Perspectives* (Cambridge: Cambridge University Press, 1991); David C. Lindberg and Ronald L. Numbers, eds., *God & Nature*, (Los Angeles: University of California Press, 1986).

<sup>14</sup> Margaret C. Jacob, *Cultural Meaning of the Scientific Revolution* (Philadelphia: Temple University Press, 1988), 111.

<sup>15</sup> Kramnick, xx.

Francis Bacon in his *Novus Organum* of 1620 was much lauded by Enlightenment thinkers as the first thinker to validate empirical thinking. He wrote:

They who have presumed to dogmatize on Nature, as on some well-investigated subject, either from self-conceit or arrogance, and in the professorial style, have inflicted the greatest injury on philosophy and learning. For they have tended to stifle and interrupt inquiry exactly in proportion as they have prevailed in bringing others to their opinion: and their own activity has not counterbalanced the mischief they have occasioned by corrupting and destroying that of others.<sup>16</sup>

For Bacon, and those who followed his example, inquiry was king and dogma its worst enemy; ideas should be put forth freely, not censured by practitioners of the “professorial style.” Enlightenment thinkers expanded on Bacon’s appreciation of the virtues of first-hand evidence and experience, believing that the more truths men discovered the more truth all of humanity would possess. This sentiment was expressed by the Marquis de Condorcet, in his 1795 essay, “The Future Progress of the Human Mind,” in which he wrote, “The strengths and limits of man’s intelligence may remain unaltered; and yet his instruments that he uses will increase and improve...the methods that lead genius to the discovery of truth increase at once the force and speed of its operations.”<sup>17</sup> In this intellectual framework, empirical science would serve as a foundation and personal liberty would permit experimentation and critical thinking of the natural and the social world. As the Baron d’Holbach, Paul Henri Thiry, explains, “...let the human mind apply itself to the study of nature, to intelligible objects, sensible truths, and useful knowledge.”<sup>18</sup>

The use of the mind to create “useful knowledge” was paramount in Enlightenment thought. The theories and ideas that were the fruit of this cognitive labor were as diverse as those who expressed them, but the right to express them was at the root of the Enlightenment intellectual project. Ideally,

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<sup>16</sup> Francis Bacon, *Novum Organum*, in the Hanover Historical Texts Project, <http://history.hanover.edu/texts/Bacon/novorg.html> (accessed March 27, 2010), para. 1.

<sup>17</sup> Marquis de Condorcet, “The Future Progress of Humankind,” in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 33-34.

<sup>18</sup> Baron D’Holbach, “No need of theology...only of reason...,” in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 143-144.

there were no limits on the human mind; neither church nor state had the right to censure the operations of reason. In the words of the Baron d'Holbach, "To learn the true principles of morality, men have no need of theology, of revelation, or gods: They have need only of reason."<sup>19</sup> Indeed, reason was also the road to religion.<sup>20</sup> Thomas Paine wrote, "It is only by the exercise of reason that man can discover God. Take away that reason and he would be incapable of understanding anything..."<sup>21</sup> It was not consensus that the philosophes sought, but a free arena in which to debate their ideas without restriction. Without the free exercise of reason new knowledge would not develop and grow. Perhaps the best visual example of the importance of reason is the Tree of Knowledge in the Encyclopedia. The tree's central branch is that of reason, from which metaphysics, theology, ethics, logics, mathematics and physics (which branched into the other sciences) sprouted. Without the freedom of reason to spur original thought, the growth of human knowledge would be stunted.<sup>22</sup>

A rejection of prior authority as a limiting factor was also part of the philosophes' reaction to political power. Although they did not do so uniformly, many Enlightenment thinkers rejected the idea of unearned and unlimited power. Immanuel Kant thought that people could no more rely on political figures than the clergy. In 1784 he wrote, "What a people cannot decree for itself can even less be decreed for them by a monarch."<sup>23</sup> The actual structure of government that was preferable was a matter of considerable debate, but most agreed that authority, however conferred, ought to work for the good of the people it governed. The best rulers should have virtue and their citizens should have full exercise of their liberty. In his 1748 *Spirit of the Laws*, Montesquieu posited, "Political liberty is to be found only in moderate governments;" in order to prevent abuse of power, "...it is necessary from the

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<sup>19</sup> Ibid. 144.

<sup>20</sup> Perhaps the road to atheism is a more apt description, as the Baron d'Holbach was an atheist.

<sup>21</sup> Thomas Paine, "The Age of Reason," in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 180.

<sup>22</sup> I. B. Cohen, *From Leonardo to Lavoisier 1450-1800*, vol. 2 of *Album of Science* (New York: Scribner's, 1980), 269; Daniel J. Weber, *Spanish Bourbons and Wild Indians* (Waco, TX: Baylor University Press, 2004), 4.

<sup>23</sup> Immanuel Kant, "What is Enlightenment," in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 5.

very nature of things that power should be a check to power.”<sup>24</sup> Governments should be controlled and leave men to their own minds as much as possible. As the Earl of Shaftsbury stated succinctly in 1699 when explaining how governments had become too involved with determining men’s personal theologies, “’Tis a hard matter for a government to settle wit.”<sup>25</sup>

It is now generally agreed that the Enlightenment thinkers can be considered as an intellectual community very aware of its own existence. As Sankar Muthu has concluded, “Whatever the conclusions and assessments that one draws from their diverse writings, it is clear that many social and political reformers of the eighteenth century saw their efforts as part of a broad, though as a diffuse and contentious, multinational effort.”<sup>26</sup> Robert Darnton described the group as, “Men of letters acting in concert and with considerable autonomy to push through a programme...They were marked as a group by persecution, just enough to dramatize their daring and not enough to deter them from undertaking more.”<sup>27</sup> Voltaire wrote essays lauding the contributions of Francis Bacon and Isaac Newton, commonly viewed as the precursors to the rise of Enlightenment thought.<sup>28</sup> Many writers contributed to collaborative projects like the *Encyclopédie* and letters flew between Enlightenment thinkers about one another’s work.<sup>29</sup> As a self-aware group dedicated to battling the injustices and ignorance that they felt surrounded them, Enlightenment writers developed certain intellectual weapons with which to make their cases. The main method used to confer new authority on their ideas as opposed to those of past traditions was to stress the concept of reason based on experience and to acknowledge those of their contemporaries who agreed with them. As David Hume explained in *A Treatise of Human Nature*, “...Mr.

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<sup>24</sup> Baron de Montesquieu, “The Spirit of the Laws,” in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 412.

<sup>25</sup> Earl of Shaftsbury, “On Enthusiasm,” in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 95.

<sup>26</sup> Sankar Muthu, *Enlightenment against Empire* (Princeton: Princeton University Press, 2003), 6.

<sup>27</sup> Robert Darnton as quoted in Martin Fitzpatrick, “Toleration and the Enlightenment Movement,” In *Toleration in Enlightenment Europe*, eds. Ole Peter Grell and Roy Porter (Cambridge: Cambridge University Press, 2000), 24.

<sup>28</sup> Kramnick, ix.

<sup>29</sup> For example, Addison refers to Locke, the poet Cowley, and others (see excerpt in Kramnick, 316). Rousseau and Voltaire exchanged letters over the state of the human race (Kramnick, 375).

Locke, my Lord Shaftsbury, Dr. Mandeville, Mr. Hutcheson, Dr. Butler, who, tho' they differ in many points among themselves, seem all to agree in founding their accurate disquisitions of human nature entering upon experience."<sup>30</sup>

If reason was so highly valued in Enlightenment thought, its importance was partially based on the belief that not everyone possessed such a virtue. D'Alembert, in his "Preliminary Discourse to the Encyclopedia," declared, "the free operations of the intellect are the lot of those who think themselves to be the most favored of nature."<sup>31</sup> A lack of education, or the wrong kind of education, as Rousseau explained in *Emile*, could leave a man unable to reason correctly, rendering him inferior and backward. Education should begin early, "from the first moment of life, men ought to begin learning to deserve to live."<sup>32</sup> As Butterwick et al. outline, the "main body" of Enlightenment treatises and essays were concerned with correcting backwardness and guarding against ignorance, the enemies of reason.<sup>33</sup> However, although Enlightenment thinkers generally agreed that the uninformed were not using their faculties to their greatest extent, practically speaking a proper education was only easily accessible to a select group of upper-class males. Thus, reason was a faculty which had to be carefully developed and nurtured according to a specific method, but it was not something which everyone could attain.

As a practical matter, the proper education and the skills needed to contribute to the Enlightenment intellectual project excluded the majority of people from exercising their full measure of reason so valued by the intellectual elite. Benjamin Franklin, who exemplified proper education and

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<sup>30</sup> David Hume, "A Treatise of Human Nature," in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 196. In this part of the essay Hume was discussing the generally accepted idea that the human mind was dominated by reason and logic, which practically all his cited contemporaries agreed with despite their quarrels over the origins and overall capacity of the human mind.

<sup>31</sup> Jean Le Rond d'Alembert, *Preliminary Discourse to the Encyclopédie*, trad. Richard Hooker, in the WSU World Civilization Reader, [http://www.wsu.edu:8080/~wldciv/world\\_civ\\_reader/world\\_civ\\_reader\\_2/dalembert.html](http://www.wsu.edu:8080/~wldciv/world_civ_reader/world_civ_reader_2/dalembert.html) (accessed April 13, 2010).

<sup>32</sup> Jean-Jacques Rousseau, "Children and Civic Education, in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 233-234. Rousseau's ideas about education were varied and even contradictory at times. *Emile* and his *Discourse on Arts and Sciences* are excellent examples of his complex opinions on the subject. Locke too thought that the wrong education, or an education focused on subjects that would have no bearing on one's life, for example Latin, would be misleading. He also disapproved of an education that followed a strict curriculum, as that turned a man from wanting to learn. See Locke's essay, "Some Thoughts Concerning Education" (1693).

<sup>33</sup> Butterwick et al., 7.

behavior, made a list of moral virtues that would lead to success, a kind of check-list for how the use of reason allowed one to be deemed enlightened. In the list he included the capacity for order, resolution, and justice.<sup>34</sup> Reason was an active mental faculty, but it was also an individual trait that consisted of both natural wit and acquired education. Although every man had a right to use his reason to gain knowledge, reason was thus not a faculty all possessed, but a cultivated skill whose demonstration qualified a man for inclusion in the Enlightenment project.

Rather anachronistically, many view the Enlightenment as a time of equality and recognition of a common humanity. A common humanity was indeed discussed, but as a baseline for the species; not all humans possessed reason or the ability to cultivate it due to their mere inclusion in the category. This general consensus still allowed for a diversity of views to be voiced; just look at the differences between Rousseau and Voltaire concerning the glories of modernity,<sup>35</sup> as well as between Kant and Hamann over Kant's essay, "What is Enlightenment?"<sup>36</sup> While the Enlightenment did not have just one opinion about practically anything, there was a favored methodology in which the ideas that were discussed could be framed. As Outram explains, the correct application of the methods of showing reason "allowed access to membership of a new elite, one not of wealth or of noble descent, but of verbal and intellectual skills."<sup>37</sup> If one did not already employ the proper discourse, then one was not to be seriously considered to possess the requisite level of reason.<sup>38</sup> The philosophes formed, in their minds, a socio-cultural elite that deserved praise and could be seen as representative of Western civilization, making those outside that elite inferior.

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<sup>34</sup> Benjamin Franklin, *The Works of Dr. Benjamin Franklin* (Philadelphia: William Duane, 1818), 89.

<sup>35</sup> See Rousseau's "Discourse on Arts and Sciences" (1750) and Voltaire's letter response to Rousseau of August 30, 1755.

<sup>36</sup> For a discussion of the debate over Enlightenment between Hume and Kant see Outram, 28-35.

<sup>37</sup> Outram, 32.

<sup>38</sup> It should be noted that the term "enlightened" would not necessarily have been used by contemporary thinkers as the word was in flux with regard to its definition. At the beginning of the century Enlightenment still had spiritual overtones and Kant's essay defining Enlightenment was not written until 1784. While the philosophes themselves were debating what Enlightenment really meant, they were nonetheless still excluding those who could not use the same ideology to enter the debate. This exclusion was highly preferential to those with educated, European backgrounds.

The creation of a new intellectual authority was legitimized because the authority was not based on unearned titles or ancient institutions, but on individual merit. The fact that such ability was possible only with a certain level of privilege and access to education and power was not seen as problematic by most philosophes. If one had the ability to learn the method of reason of the Enlightenment, then one could enter their intellectual ranks, as indeed they had done. Robert Darnton has shown this power of authors to spread their ideas if they were presented in the requisite form of reason, even if the books were officially censored. Pornographic novels often depicted intellectuals discussing their theories between intervals of intercourse. Cartoons even depicted the great Voltaire in the throes of sexual acts.<sup>39</sup> However, due to the privileged nature of this new meritocracy of reason, many individuals were still left out.<sup>40</sup>

Withers explained this elite sense of Enlightenment thinkers well when he writes, "Looking back on eighteenth-century claims concerning the power of reason, it is clear that enlightened thinking did not mean--and certainly has not resulted in--liberation from irrationality and ignorance."<sup>41</sup> While the Enlightenment saw an upsurge in education and especially in reading, it in no way sought to include everyone and indeed was not intended to. Diderot wrote, "There are some readers whom I don't want, and never shall; I write only for those with whom I could talk at my ease."<sup>42</sup> As Outram explains, "...in spite of its universalism, the Enlightenment often seemed to devote as much energy to designating

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<sup>39</sup> See Robert Darnton, *Forbidden Bestsellers of Pre-Revolutionary France* (New York: W. W. Norton and Company, 1995). For a copy of the cartoon see Outram, 140.

<sup>40</sup> Both Butterwick et al. and Raúl Hernández Asensio call this relationship between the philosophes and the less-educated around them as a center-periphery relationship, where the center-periphery was not just geographic, but also intellectual. Asensio underscores that science especially created a "paradigm of modernization and the advance of human progress" which "establishes a rupture between center and periphery." See Asensio, *El matemático impaciente: La Condamine, las pirámides de Quito y la ciencia ilustrada (1740-1751)* (Quito, Ecuador: Universidad Andina Simón Bolívar, Sede Ecuador, 2008), 13.

<sup>41</sup> W. J. Withers, *Placing the Enlightenment* (Chicago: University of Chicago Press, 2007), 4.

<sup>42</sup> Diderot as quoted in Outram, 56.

entire social groups, such as women or peasants or the poor, as deaf to the voice of reason, as it did to constructing a better world.”<sup>43</sup>

The philosophes were open to admitting individual correspondents from excluded groups to the Republic of Letters if they proved themselves sufficiently schooled.<sup>44</sup> Joseph Addison, editor of the London-based periodical *The Spectator*, described the typical man of letters:

A man of polite imagination is let into a great many pleasures that the vulgar are not capable of receiving. He can converse with a picture and find an agreeable companion in a statue. He meets with a secret refreshment in a description, and often feels a greater satisfaction in the prospects [distant views] of fields and meadows, in everything he sees, and makes the most rude uncultivated parts of nature administer to his pleasures: so he looks upon the world, as it were, in another light, and discovers in it a multitude of charms, that conceal themselves from the generality of mankind.<sup>45</sup>

Thus, alongside wealth and status, the established social indicators for which Enlightenment thinkers still had considerable regard, new exclusionary barriers were being erected, couched in terms of intellectual capacity and levels of civilization.

Civilization, like reason, was an achievement, not just a quality bestowed on all who lived within it. It is significant the systematic study of human beings in cultural context appeared in their modern forms during the eighteenth century.<sup>46</sup> For example, the Addison quotation above makes a crucial distinction between the ability to appreciate beauty that separates men of reason and taste from the vulgar despite the fact that both live in approximately the same civilization. This ability to appreciate the fruits and duties of civilization was a personal quality, according to Enlightenment thinkers. As Adam Smith notes in his “The Theory of Moral Sentiments,” an “impartial spectator” should employ self-command in his interaction with society around him. It is not love of fellow man that compels an

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<sup>43</sup> Outram, 85. This will be discussed at length later in this work, but for an overview see Outram, Chapter 2.

<sup>44</sup> For more information on the Republic of Letters see Dena Goodman, *Republic of Letters: A Cultural History of the French Enlightenment* (London: Cornell University Press, 1994) and Ulrich Im Hof, *The Enlightenment* (Oxford: Wiley-Blackwell, 1997).

<sup>45</sup> Addison as quoted in Outram, 56.

<sup>46</sup> Larry Wolff, “Discovering Cultural Perspective: The Intellectual History of Anthropological Thought in the Age of Enlightenment,” in *The Anthropology of the Enlightenment*, eds. Larry Wolff and Marco Cipollini (Stanford: Stanford University Press, 2007), 11.

enlightened individual to labor for his race, but “a stronger power, a more forcible motive, which exerts us...It is reason, principle, conscience, the inhabitant of the breast, the man within, the great judge, and arbiter of our conduct.”<sup>47</sup> Anyone not equipped with these qualities, whether an uneducated peasant or an indigenous American, would not have the capacity to listen to such an inner voice.

Rousseau, although he argued that man was naturally peaceful and non-competitive when he was not corrupted by the trappings of civilization, still also assumed that reason and intelligence were attainable only through social interaction. As Moran III explains about Rousseau’s theories, “The common trait underlying each of the features Rousseau is willing to credit to natural man is the limited intelligence of human beings in the state of nature, since stupidity prevents the development of jealousy, vanity, exploitation and slavery.”<sup>48</sup> In *Emile*, Rousseau makes a case for the thinking man as self-aware and uses language similar to Smith’s; thus, reasonable men are able to listen to “the internal voice which, nonetheless, calls them so loud and emphatically.”<sup>49</sup> However, he is also arguing that proper education in the development of reason is necessary in order to hear the voice in the first place, which he believes a man in the natural state is not intelligent enough to do. Both in Rousseau’s 1762 novel, one of the most popular published works of the century, and in Smith’s 1759 essay, a certain degree of civilization is considered necessary for an individual to be able to attain reason.

The Baron d’Holbach argued that truth is essentially self-evident, like Rousseau’s inner voice, but that religion and other institutions confuse the ignorant.<sup>50</sup> Those that follow truth are “upright”, but to be upright requires the ability to see beyond falsehoods. As he wrote in 1772, “Men are unhappy only because they are ignorant: they are ignorant only because everything conspires to prevent their being

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<sup>47</sup> Adam Smith, *The Theory of Moral Sentiments*, 2<sup>nd</sup> ed. (London: A. Miller, 1761), 213.

<sup>48</sup> Francis Moran III, "Between Primates and Primitives: Natural Man as the Missing Link in Rousseau's Second Discourse," in *Philosophers on Race: Critical Essays*, ed. Julie K. Ward and Tommy L. Lott (Oxford: Blackwell Publishers, 2002), 137.

<sup>49</sup> Jean-Jacques Rousseau, “Profession of Faith of a Savoyard Vicar,” in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 138.

<sup>50</sup> Truth was what reason sought to reveal; in Enlightenment thought reason was the quality and ability to correctly order knowledge to understand the truth of situations. The ignorant could not order their thinking in a reasoned way, which is what d’Holbach is lamenting here.

enlightened.”<sup>51</sup> D’Holbach and his enlightened friends knew that at the present moment, the vast majority of humanity lived in precisely such a state of ignorance. Overcoming ignorance required a combination of talent, effort and fortunate birth; it was thus dependent on place and circumstance. The rank of “civilized” had to be earned, as Wolff explains. It was a goal to be obtained that would “establish hierarchically Europe’s cultural priority with respect to the rest of the world.”<sup>52</sup>

Condorcet describes the Enlightenment project of which he was a part as an entity that spreads, but that meets “special obstacles” which impede the progress of reason.<sup>53</sup> He focused specifically on the New World, arguing that so-called savage nations were not enlightened and could not discover how to become so on their own. The cultural knowledge of indigenous peoples did not resemble the definition of reason held by Europeans and this left indigenous peoples in a distinctly inferior status. For Condorcet, it was up to European colonists where they existed to combat the ignorance that surrounded them and to, “civilize or peacefully remove the savage nations who still inhabit vast tracts of its land.”<sup>54</sup> However, it was incumbent on those on the periphery, educated or not, to try to catch up to the expectations of reasoning individuals. Individuals on the periphery could assert their claims to a civilized status, as did José Antonio Alzate y Ramirez in New Spain.<sup>55</sup> However, the barriers to proving oneself reasonable were formidable for creole residents as individuals and nearly impossible for groups of indigenous persons who were without access to the means to demonstrate reason.

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<sup>51</sup> Baron D’Holbach, “No need of theology...only of reason,” in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 145.

<sup>52</sup> Wolff, 10. However, critics of such a Eurocentric worldview did exist. Benito Jerónimo Feijoo, in his 1726-39 work, *Teatro crítico universal*, argued that Europeans dating back to the conquistadores had seen the Americas as bizarre because they were unfairly comparing them to their own cultures. However, his own countrymen ignored him in their own works, preferring the more prevalent racial discourse of the time that subordinated indigenous peoples and saw them as incapable of reason. See Neil Safier, *Measuring the New World* (Chicago: University of Chicago Press, 2008), 187.

<sup>53</sup> Marquis de Condorcet, “The Future Progress of the Human Mind,” in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 28. The discussion of civilization and the rationality of those in the New World has a longer history than is discussed here. For example, the Spanish chroniclers long debated the mental capacity and rationality of indigenous peoples they encountered in the colonies in the fifteenth and sixteenth centuries.

<sup>54</sup> *Ibid*, 28.

<sup>55</sup> Butterwick et al., 9; For more on Alzate see José Antonio de Alzate y Ramírez, *Memorias y ensayos*, ed. Roberto Moreno (Mexico City: UNAM, 1985).

## Enlightenment Racial Discourse

Who then were these so-called unreasonable savages? What were the images and representations of indigenous Americans in Enlightenment thought? Who constructed these perceptions of the indigenous person as “Other,” as outside the realm of those who could reason? These questions frame the next section of this essay, which explores the Enlightenment discourse surrounding race as it pertains to the indigenous peoples of the Americas.

Using the Enlightenment distinction of reason as a quality that was developed through a proper method, indigenous peoples in their native state were not seen as reasonable. There was considerable skepticism that they could readily attain such a distinction. Civilized men could, according to the worth of their ideas and knowledge, but those outside the European model of civilization were judged by an entirely different set of criteria. As Fowkes Tobin explains, “In the eighteenth century, the civility of human societies was established by the nature of their economic and political organization,” i.e. by the measure of European politico-economic models.<sup>56</sup> This placed Americans at a distinct disadvantage both in encounters with Europeans in their native lands and in the instances when an indigenous American was brought to Europe. In every case, a judgment was rendered that neglected to assess completely the origins of cultural difference. As Peter Hulme explains, “Failure to consult reason [on the part of indigenous Americans] is clearly in the American case a moral failure in no way mitigated by circumstances.”<sup>57</sup> This raises the question whether Europeans were either willing or able to penetrate beneath the most superficial aspects of language and material culture to acknowledge the developmental model of civilization with which the most enlightened explorers and travel writers were familiar. Certainly indigenous Americans were unable to challenge the kinds of judgments made about

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<sup>56</sup> Ann Hontanilla, “Images of Barbaric Spain in Eighteenth-Century British Travel Writing,” in *Studies in Eighteenth Century Culture* (2008), 134.

<sup>57</sup> Peter Hulme, “The spontaneous and of nature: savagery, colonialism, and the Enlightenment,” in *The Enlightenment and its Shadows*, eds. Peter Hulme and Ludmilla Jordanova (London: Routledge, 1990), 33.

them because, whatever similarities they or their cultures shared with more refined societies, they were negated by the estrangements of language, folkways, and embodied racial difference. Negative perceptions could not be easily challenged because the indigenous Americans were not able to communicate within the framework dictated by those who considered themselves as educated and reasonable. The exclusive method necessary to demonstrate a proper capacity for reason created and reinforced the negative ideas of indigenous Americans that constituted the bulk of racial discourse during the Enlightenment.

Enlightenment racial discourse was a product of the increased interest in science that was the legacy of the Scientific Revolution. With reason as a guide, Enlightenment philosophes and men of science sought to bring new order to the world, whose borders were rapidly expanding.<sup>58</sup> Jeremy Bentham, the English jurist, wrote, “The age we live in is a busy age, in which knowledge is rapidly advancing towards perfection. Of the natural world in particular, everything teems with discovery and improvement.”<sup>59</sup> The abundance of new species and information that were introduced to Europe as part of the expansion of empire in the New World manifested as part of a new intellectual project directed toward classifying all knowledge of the world. The *Encyclopédie* of Diderot and d’Alembert is an excellent example of such ordered knowledge, but the techniques for examining the natural world employed even more rigorous methods in the hands of men like the Comte de Buffon. Attempts like his to order knowledge were an attempt to organize the huge amount of information that was now

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<sup>58</sup> Hulme and Jordanova, 9; Henry Steele Commager, *The Empire of Reason* (Garden City, NJ: Anchor Press/Doubleday, 1977), 40. Commager continues, ““What had they in common, the philosophes, the encyclopedists, the naturalists, the explorers, the historians, the statesman? They were a fellowship engaged, so they believed, in a common enterprise and bound together by a common faith. They were launched on a voyage of discovery of new worlds, new ideas, new laws, and new aspects of nature and of human nature. On these voyages of reason they steered by the compass of Reason, for while they did not disparage the emotions or the passions, they acknowledged the sovereignty of Reason, and were confident that with Reason as their guide they could penetrate to the truth about the Universe and about Man, and thus solve all of those problems that pressed upon them so insistently.” While I agree that reason was a major current of Enlightenment thought, I question the hyperbolic use of Reason as a uniting force across all nationalities and occupations. See also Paul Farber, *Finding Order in Nature* (Baltimore: The Johns Hopkins University Press, 1997) for a more in-depth discussion of the rise of natural history as a discipline. For more on the sciences in the Enlightenment see William Clark, Jan Golinski, and Simon Schaffer, *The Sciences in Enlightened Europe* (Chicago: University of Chicago Press, 1999), especially part 3.

<sup>59</sup> As quoted in Commager, 42.

available via books and travel accounts, and to rethink Europe's place in this new, vast geography.<sup>60</sup> As Reidy, Kroll, and Conway describe, "The Enlightenment notions of progress, reform, and improvement were encapsulated in the study of the world's natural diversity."<sup>61</sup>

Some of the "new" discoveries were groups of humans who lived without any of the new technology or trappings of civilization that were becoming of increasing importance to European societies. Where did these peoples fit into the new, ordered universe? Finding order for new species became not only a way to organize information, but a way to reinforce Western intellectual supremacy and assure philosophes and scientists alike that reason was a cultivated attribute of the highest order. As Tautz explains in her exploration of the construction of the Enlightenment "Other," taxonomy is a way to construct the "other" with scientific authority. It is a way to describe the perfect man, or a hierarchy of men with Europeans at the apex of the hierarchy.<sup>62</sup> "The gentlemanly tendency," as Fowkes Tobin termed it, of using scientific observation to catalogue difference and insert it into to existing cultural schemata made natural history not only a means through which to define racial difference, but also distinguished it as a discipline that could be practiced only by reasoning individuals. Participation in Enlightenment racial discourse depended on an individual's possession of a "combination of elite education and the informal inculcation of legitimate culture," which made the practice of natural history

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<sup>60</sup> See Withers, *Placing the Enlightenment*. For more on the debate over the degree to which taxonomy could truly reflect the real world, see Outram 266.

<sup>61</sup> Michael S. Reidy, Gary Kroll, and Erik M. Conway, *Exploration and Science: Social Impact and Interaction* (Santa Barbara, CA: ABC-CLIO Inc., 2007), 67.

<sup>62</sup> Tautz, 5. Tautz links the rise of racial categorization not only to taxonomic categories, but also to a reliance on the type of sources available in academic discourse, as well as ethical and aesthetic developments in the Enlightenment. For example, cultural stereotypes would vary if all one knew of a culture came from a text as opposed to physical artifacts. See also Arthur P. Whitaker, "The Dual Role of Latin America in the Enlightenment," in *Latin America and the Enlightenment*, ed. Arthur P. Whitaker (Ithaca, NY: Great Sea Books, 1961) for a discussion of the perfectibility of mankind in the colonies. Todorov adds to this debate by making the point that Europe had already encountered foreign peoples and therefore, "They had, in a sense, an empty slot where they could place newly discovered peoples without upsetting their general worldview." Tzvetan Todorov, "The Journey and its narratives," in *Transports: Travel, Pleasure, and the Imaginative Geography, 1600-1830*, eds. Chloe Chard and Helen Langdon (London: Yale University Press, 1996), 288.

a white tower of European elitism where indigenous culture could only be an object of scientific knowledge that needed to be classified.<sup>63</sup>

The giant of the classification craze of the Enlightenment was the Comte de Buffon, although he was not the first. Carl Linnaeus, or Carl von Linné as he preferred to be called after his 1761 ennoblement, is still widely considered the father of modern taxonomy. His system organized all species of plant and animal into a great “classificatory tree,” where each species could be identified, named, and categorized based on certain criteria.<sup>64</sup> It was he who named humans using the genus and species name, *homo sapiens*.<sup>65</sup> Linnaeus also classified humanity according to its various races, thus making scientific categories for human beings and creating a sort of hierarchy based on the descriptions with which he chose to describe each race of man. It is worth quoting him at length to understand his categorization:

Order 1. Primates

Foreteeth cutting: upper 4; parallel teats 2, pectoral

I. HOMO

1. Sapiens. Diurnal; varying by education and situation

a. Copper-coloured, choleric, erect. *American*.

*Hair* black, straight, thick; *nostrils* wide; *face* harsh; *beard* scanty; obstinate, content, free. *Paints* himself with fine red lines. *Regulated* by customs.

b. Fair, sanguine, brawny. *European*.

*Hair* yellow, brown, flowing; *eyes* blue; gentle, acute, inventive. *Covered* with close vestments. *Governed* by laws.

c. Sooty, melancholy, rigid. *Asian*.

*Hair* black; *eyes* dark; *fevere*, haughty, covetous. *Covered* with loose garments. *Governed* by opinions.

d. Black, phlegmatic, relaxed. *African*

*Hair* black, frizzled; *skin* silky; *nose* flat; *lips* tumid; crafty, indolent, negligent. *Anoints* himself with grease. *Governed* by caprice.

e. *Homo monstrosus*. Varying by art and culture.

1. small, active, timid. *Mountaineer*

2. Large, indolent. *Patagonian*.

<sup>63</sup> Beth Fowkes Tobin, *Colonizing Nature: The tropics in British Arts and Letters, 1760-1820* (Philadelphia: University of Pennsylvania Press, 2005), 159.

<sup>64</sup> Lisbet Koerner, “Carl Linnaeus in his time and place,” in *Cultures of Natural History*, eds. N. Jardine, J. A. Secord, and E. C. Spary (Cambridge University Press: Cambridge, 1996), 147.

<sup>65</sup> University of California Museum of Paleontology, “Carl Linnaeus (1707-1778),” *University of California Museum of Paleontology*, July 7, 2000, <http://www.ucmp.berkeley.edu/history/linnaeus.html> (accessed April 14, 2010), para 5 and 7. See also Koerner, “Carl Linnaeus in his time and place;” Londa Schiebinger, *Nature's Body: Gender in the Making of Modern Science*, (Rutger University Press: New Brunswick, N.J., 2004).

3. Less fertile. *Hottentot*
4. Beardless. *American*
5. Head conic. *Chinese*
6. Head flattened. *Canadian*<sup>66</sup>

Here is a clear hierarchy of races, with the gentle, inventive, and brawny European ranked over the obstinate and choleric American.

Linnaeus made scientific categories of humans based on information brought to him by his globe-trotting students. The scientist himself never went farther than Lapland and never encountered Native Americans, Hottentots, or the mythical Patagonian giants which he presents as factual in this entry.<sup>67</sup> In the early eighteenth century the qualities of foreign peoples were based on environmental factors, not just biological traits. For example, Linnaeus attributed as natural to Europeans close vestments and laws. Similarly, all Americans are described as regulated by customs, habitual practices not amenable to reason. Although the state of man in nature and his natural attributes was a topic of intense debate at this time,<sup>68</sup> Linnaeus' portrayal of the scientific categorization of men served as a conceptual framework that travelers carried with them as they encountered indigenous peoples around the world. He saw nature as a fixed hierarchy that could not be altered, only understood.<sup>69</sup> These conceptions were echoed many times throughout the century and would be read by the readers who trusted the authority of academic men like Linnaeus, who held a professorship at Uppsala.

Buffon, the French naturalist who presided over the Royal Gardens in Paris for over fifty years, was well-respected by many of his contemporaries, including the usually hyper-critical Rousseau and the Marquis de Chastellux.<sup>70</sup> Unlike Linnaeus, Buffon preferred a climatic and biological explanation for human differentiation and described racial difference to be a consequence of temperature and the

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<sup>66</sup> Carl Linnaeus, "Natural Systems," in *Race and the Enlightenment*, ed. Emmanuel Chukwudi Eze (Malden, Mass.: Blackwell Publishing, 2007), 13-14. This translation is from the 1806 English translation of Linnaeus. For the same classification of Homo sapiens in the 9<sup>th</sup> edition in Latin see Carl Linnaeus, "Primates," in *Systema Naturae*, 9<sup>th</sup> ed., <http://www.ucmp.berkeley.edu/history/images/systema.jpg> (accessed April 14, 2010).

<sup>67</sup> Wilfrid Blunt, *Linnaeus: The Compleat Naturalist* (London: Frances Lincoln Limited, 2004), 42-43.

<sup>68</sup> Outram, 145.

<sup>69</sup> See Eze, 12.

<sup>70</sup> Commager, 7.

effects of physical activity on the human body. According to his theories, the entire New World was retarded in its natural development, including that of its human inhabitants.<sup>71</sup> Some “savages” were indeed less cruel than others, especially those of Mexico and Peru, but all were “equally stupid, ignorant, and destitute of arts and of industry.”<sup>72</sup> No matter how thoroughly European travelers described the unique attributes of each tribe, Buffon and others concluded that indigenous Americans as a race were clearly not capable of attaining civilized European standards and could not aspire to reason. Buffon revealed his hierarchical and Europe-centered perspective in his “Initial Discourse” to the *Histoire naturelle* of 1747. He wrote, ““From every point of view, it is easier, more agreeable, and more useful to consider things in relation to us rather than from another point of view.”<sup>73</sup> In other essays, Buffon made it clear that differential capacity for reason was part of the natural world. In his “Discourse on Style” of 1753, Buffon explains that he has the most respect for a man who can express himself in written form in a manner that is “firm, lively, and concise” and who presents his argument with regard to possible counterarguments.<sup>74</sup> How would a man of the Torrid Zone, affected by his climate that rendered him “less active, less varied and even less vigorous” be able to prove himself to have “more reason than heat?”<sup>75</sup> Like Linnaeus, Buffon did not himself travel and instead depended on scientific voyages and his students to bring him samples and information which he then synthesized. The historian

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<sup>71</sup> D. A. Brading, *The First America* (Cambridge: Cambridge University Press, 1991), 429. Outram, 145. See also Peter Hans Reill, *Vitalizing Nature in the Enlightenment* (Los Angeles: University of California Press, 2005).

<sup>72</sup> Comte de Buffon, “A Natural History, General and Particular,” in *Race and the Enlightenment*, ed. Emmanuel Chukwudi Eze (Malden, Mass.: Blackwell Publishing, 2007), 18.

<sup>73</sup> Comte de Buffon, “Initial Discourse,” in *From Natural History to the History of Nature*, eds. John Lyon and Phillip R. Sloan (Notre Dame, IN: University of Notre Dame Press, 1981), 113.

<sup>74</sup> Buffon, “Discourse on Style,” in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 319-320. It is interesting to note that Linnaeus and Buffon not only differed on their systems of classification, but also on how to write about the natural world. Buffon thought that elaborate rhetoric should be used and his own writing was used as an example in French schools until the early twentieth century. Linnaeus, on the contrary, thought that natural history writing should be clear and free of stylistic rhetoric. He thought that the labels of his taxonomy were quite enough. See Koerner, 155 and Londa Schiebinger, “Gender and natural history,” *Cultures of natural history*, N. Jardine, J. A. Secord, and E. C. Spary (Cambridge: Cambridge University Press, 1996), 172.

<sup>75</sup> Buffon, *Natural History*, 10 vols. (London: 1747), I, 211; Buffon, “Discourse on Style,” in *The Portable Enlightenment Reader*, 321.

Henry Steel Commager traced the majority of Buffon's sources to earlier Spanish accounts of the New World.<sup>76</sup>

Buffon was not the only philosophe and scientist to believe that climate explained the racial characteristics of indigenous Americans and other peoples as compared to Europeans. Wrigley contends, "The importance of climate and environment for the determination of cultural phenomena was a key component in eighteenth-century theories regarding cycles of cultural efflorescence and decline."<sup>77</sup> Montesquieu also thought that climate influenced the cultural and political development of a nation.<sup>78</sup> However, perhaps the most influential believer in a theory of environmental determinism was the Dutch cleric and writer Cornelius de Pauw. In 1768, he combined the ideas of environmental determinism and American exceptionalism, concluding that America was behind in its natural development; ideas that Buffon had written about originally in the first edition of the *Histoire naturelle* in 1747.<sup>79</sup> Although never schooled in classification as Buffon and Linnaeus were, de Pauw was far more pugnacious in the presentation of his thesis that the climate of America degraded not only the indigenous inhabitants of the region, but also Europeans who chose to live there.<sup>80</sup> De Pauw moved racial discourse from the largely academic focus of Buffon toward a more general, and in this case negative, account of those that lived in the New World. In his work, it is possible to see a solidification of the conclusions about indigenous Americans in the Enlightenment.<sup>81</sup> De Pauw thought that previous histories glorifying the history of the Incas, like the seventeenth century works of Garcilaso de la Vega, were ridiculous and preferred more "reliable" sources like the travel journals that had recently been

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<sup>76</sup> Commager, 65.

<sup>77</sup> Richard Wrigley, "Infectious Enthusiasms: Influence, Contagion, and the Experience of Rome," in *Transports: Travel, Pleasure and Imaginative Geography, 1600-183*, eds. Chloe Chard and Helen Langdon (London: Yale University Press, 1996), 91.

<sup>78</sup> Brading, 429.

<sup>79</sup> *Ibid.*

<sup>80</sup> De Pauw as quoted in Brading, 429. For the original work, see Cornelius De Pauw, *Recherches philosophiques sur les américains* (Berlin: George Jacques Decrer, 1769).

<sup>81</sup> Outram, 145-146.

written by men of science like La Condamine.<sup>82</sup> While this preference betrays a certain sense of national prejudice against Spanish sources, it also harkens to the Enlightenment preference for results obtained through observation, which the burgeoning genre of scientific travel logs provided to the armchair philosophers who remained in France and the rest of Europe.<sup>83</sup> It also assured that the perception of the New World that reached readers of both travel logs and philosophical histories were reading accounts based on a limited number of perceptions of indigenous Americans.

The influence of de Pauw and Buffon continued to appear in other publications, including the *Histoire philosophique des deux Indes*, first published in 1770 by the Abbé Raynal. In this first edition of his work, Raynal was rather flattering about the Incas and Aztecs and trusted in the older sources written by Spanish explorers of the 16<sup>th</sup> and 17<sup>th</sup> centuries.<sup>84</sup> However, in subsequent editions published after the popular tract by de Pauw was written, Raynal too challenged the Spanish sources and questions why indigenous peoples were seemingly undeveloped in light of their glorious history.<sup>85</sup> He concluded that America must be behind Europe somehow, but he did not necessarily ascribe to the environmental determinism of Buffon and de Pauw. While he agreed that the Americans were indeed inferior, he was unsure whether such primitive behavior was a result of “the decay or the infancy of nature.”<sup>86</sup> Indeed, degeneration versus development as a means to explain the lack of civilization amongst indigenous Americans was a popular debate at the time. Raynal presented a compendium of arguments about the state of indigenous peoples. At times he agreed with Rousseau that perhaps man should envy the simple native man, uncorrupted by civilization, while at other times he claimed that

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<sup>82</sup> Jorge Cañizares Esguerra, *Cómo escribir la historia del Nuevo Mundo* (Mexico City: Fondo de Cultura Económica, 2007), 63.

<sup>83</sup> The term “armchair philosophers” is from Londa Schiebinger. See Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (2004).

<sup>84</sup> See especially volumes 6 and 7 of Abbé Raynal, *Histoire philosophique et politique des établissements des Européens dans les Deux Indes* (1770). See also Peter Jimack, *A History of Two Indies: A Translated Selection of Writings from Raynal's Histoire philosophique et politique des établissements des Européens dans les Deux Indes* (Hampshire, England: Ashgate Publishing Limited, 2006) for excerpted English translations. For a discussion of the differences in the first three editions, see Esguerra 71-76.

<sup>85</sup> Abbé de Raynal, *Histoire philosophique et politique des établissements des Européens dans les Deux Indes*, 3<sup>rd</sup> edition (Amsterdam: 1774).

<sup>86</sup> Abbé de Raynal, *A philosophical and Political History of the Settlements and Trade of the Europeans in the East and West Indies*, 3<sup>rd</sup> edition, trans. J. O. Justamond, (London: 1798), vol. V. 137.

climate degenerates the indigenous peoples, while alleging that the Americans are humanity “in its infancy.”<sup>87</sup>

The idea that indigenous Americans represented an earlier state of human development was a popular explanation for their subordinate status during the Enlightenment. William Robertson, like Raynal, discussed both environmental determinism and historical development in his *History of America* in 1777. He also depended quite heavily on older Spanish sources while eschewing the validity of more contemporary creole sources, much to the dismay of educated creoles in the New World.<sup>88</sup> This was partially due to his conviction that the American environment had degraded the creole mind. In his mind indigenous Americans exhibited a “feebleness of constitution” that was “universal.”<sup>89</sup> Robertson did not stop at a climatic explanation, however. He attributed the weak constitution of indigenous Americans as examples of man closer “to the brute creation.”<sup>90</sup> The entire *History of America* was an attempt to show his philosophical approach to history; he wrote, “In every part of the earth the progress of man has always been the same in his career from the rude simplicity of savage life until he attains the industry, the arts and the elegance of polished society...”<sup>91</sup> As Esguerra has explained Robertson’s approach to history, “This version of history drove Robertson to see the world as a living museum where different peoples occupied distinct levels in a great spectacle of emotional and economic development.”<sup>92</sup> Indigenous Americans were thus not autonomous peoples with unique cultures, but a mere level on the way to superior European civilization. Their reason was in its infancy which would only eventually progress to the level of articulate writers like Robertson.

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<sup>87</sup> Ibid, 292-302, 137. Interestingly enough, Raynal also offers a critique of slavery and colonialism and admits that the ability to reason was not a good enough argument by which to mistreat other humans. However, based on the inadequacy of indigenous peoples to properly exploit resources, Raynal did not call for the abolition of slavery or mistreatment of indigenous peoples, reinforcing the idea that a lack of reason somehow legitimized maltreatment. See Outram, 178.

<sup>88</sup> Brading, 433; Bruce P. Lenman, “From savage to Scot,” in *William Robertson and the expansion of empire*, ed. Stewart J. Brown (Cambridge: Cambridge University Press, 1997), 203-204.

<sup>89</sup> Robertson, *The Works of William Robertson, D.D* (Dublin: Messrs. Whitestone, et al., 1777), Vol. VI, 320.

<sup>90</sup> Ibid, VI, 320.

<sup>91</sup> Ibid, VI, 259.

<sup>92</sup> Esguerra, 83, translation by author. Edmund Burke too thought that Robertson had achieved the creation of a theory of universal development. He said it was as if, “the great map of mankind is unrolled at once.” However, he also thought that, “in one or two points you have hardly done justice to the savage character.” For more on this correspondence see Lenman, 204.

Contemporaries of Robertson agreed with the hierarchical schema in Robertson's *History*. Anthropological thought in the Enlightenment subscribed to a historical progression toward a more reasonable and just world built upon the two models of human development that were common at the time. The first was the three tiered sequence of human development from brute savagery to barbarism, and then to civilization.<sup>93</sup> Another hierarchical model based on stages of development was Adam Smith's "Four-Stage Theory of Development," based on economic development over time. Men started as Hunters, but would eventually want to store food, leading to the second stage of Shepherds. Eventually the growing population would necessitate a development of Agriculture, in which a more sedentary lifestyle would lead to the separation of occupations and arts. Trading for the benefits of products from the various trades resulted in the fourth stage, Commerce. Smith believed such a progression was natural and held that all societies would trend toward Commerce with "all its power towards its ease and convenience."<sup>94</sup> Such a theory was especially useful because it accounted for the earlier barbarism of progressive nations like England while simultaneously explaining their superiority to their less developed colonial holdings.<sup>95</sup> It also preserved a common humanity within a general framework of cultural differentiation.

A final trend regarding perceptions of indigenous peoples framed the racial discourse of the time. Although indigenous peoples were examined for their own perceived shortfalls, they were also used as a basis by which to critique contemporary Europe. As Diderot exclaimed, "The life of savages is so simple, and our societies are such complicated machines!"<sup>96</sup> Voltaire and Montesquieu both used fictional indigenous peoples to narrate a critique of contemporary European culture, Voltaire in *Candide* and Montesquieu in his *Persian Letters*. Rousseau, as we have seen, led a school of thought which

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<sup>93</sup> Anthony Pagden, "The Immutability of China: Orientalism and Occidentalism in the Enlightenment," in *The Anthropology of the Enlightenment*, eds. Larry Wolff and Marco Cipollini (Stanford: Stanford University Press, 2007), 166, 168.

<sup>94</sup> Adam Smith, "The Four-Stage Development Theory," in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 380.

<sup>95</sup> Roxann Wheeler, "Limited Vision of Africa: Geography of savagery and civility in early eighteenth-century narratives," in *Writes of Passage*, eds. James Duncan and Derek Gregory (London: Routledge, 1999), 20.

<sup>96</sup> Denis Diderot, *Rameau's Nephew and other writings* (1956; reprint Indianapolis: Hackett Publishing Inc., 2001), 186.

believed that man in his native state was far happier for his simplicity of life than men surrounded by the trappings of civilization.<sup>97</sup> As Reidy et al. summarize, “The philosophes were preoccupied with the corruption they saw in their own civilized society, and they continually questioned whether it was man or civilization that was corrupted.”<sup>98</sup>

Whether critiquing the world they lived in or explaining how indigenous Americans lived in theirs, Enlightenment racial discourse on indigenous peoples employed a specific vocabulary of dominance and subordination.<sup>99</sup> No matter if the explanation was one of environmental determinism, a hierarchy of historical development, or one of American natural exceptionalism, the theory was invariably deployed to explain American inferiority. Indigenous Americans were always lacking something; stature, commercial development, intelligence, the arts or sciences, or proper clothing. On the assumption that the “ultimate Occidental goal” of Enlightenment intellectual thought was the apotheosis of reason and its methods, the philosophes could situate themselves in the highest level of civilization.<sup>100</sup>

Pagden has argued that the ranking of cultures went from East to West, reaching the Americas last. He posits that this period witnessed the rise of Occidentalism, although it is plausible to argue that ethnocentricity had always been a part of the battles for power in Europe. However, Pagden suggests that the eighteenth century may have been the period in which a more unified Eurocentric worldview solidified.<sup>101</sup> The hierarchy of culture saw China as ancient and unmoving, yet also as highly cultured and skilled in certain arts, especially textiles and ceramics. Bergit Tautz also comments on Europe’s valuation of Asian cultures over American cultures based on the appreciation and utility of Chinese material

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<sup>97</sup> Jean-Jacques Rousseau, “A Critique on Progress,” in *The Portable Enlightenment Reader*, ed. Isaac Kramnick (New York: Penguin Books, 1995), 364, 368.

<sup>98</sup> Reidy et al., 67.

<sup>99</sup> Eze, 7.

<sup>100</sup> Larry Wolff and Marco Cipollini, “Introduction,” in *The Anthropology of the Enlightenment* (Stanford: Stanford University Press, 2007), xii. The Europeans used comparative methods to view indigenous Americans in order to understand themselves better. See Hulme and Jordanova, 7-8.

<sup>101</sup> Anthony Pagden, “The Immutability of China: Orientalism and Occidentalism in the Enlightenment” in *The Anthropology of the Enlightenment*, eds. Larry Wolff and Marco Cipollini (Stanford: Stanford University Press, 2007), 61.

culture and texts. When the culture could be seen as productive, as China's was, it could be characterized as more civilized, in contrast to unproductive America.<sup>102</sup> Whereas translations of Eastern philosophical texts were available in Europe in the eighteenth century, indigenous Americans had no written texts. Outram agreed that Chinese and Eastern cultures were seen as slightly more civilized than those of the Americas based on the high visibility of Chinese culture as opposed to the still rare American artifact.<sup>103</sup> The act of seeing such finished goods created a more sympathetic understanding of Asia than of the Americas or Africa, where only raw natural resources or indigenous goods for curiosity closets were brought back to Europe.

In other parts of the world, Enlightenment thinkers interpreted the discovery of new peoples from Buffon's "us and them" perspective. According to Muthu, "In addition to the fact that the indigenous inhabitants of the New World had been considered by many Europeans, from the fifteenth century onward, to be subhuman, it is crucial to note that even when their humanity was accepted, they failed to win recognition as free and self-governing peoples."<sup>104</sup> Though they conceded the humanity of indigenous Americans, the limiting factor was that the title of "civilized" was reserved for those who were capable of exhibiting reason.<sup>105</sup> Thus Enlightenment thinkers did not simply construct an unmediated idea of an all-encompassing "other;" they constructed a conditional status of subordination that could be overcome in the fullness of time, by great effort and with European example.<sup>106</sup> As Diderot wrote, "The character of a nation consists in a certain propensity of the soul more commonly found in

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<sup>102</sup> Tautz, 4-5.

<sup>103</sup> See Outram, chapter 4.

<sup>104</sup> Sankar Muthu, *Enlightenment against Empire* (Princeton: Princeton University Press, 2003), 7.

<sup>105</sup> Larry Wolff, "Discovering Cultural Perspective: The Intellectual History of Anthropological Thought in the Age of Enlightenment" in *The Anthropology of the Enlightenment*, eds. Larry Wolff and Marco Cipollini (Stanford: Stanford University Press, 2007), 22. This concept frequently included proper exploitation of land, as Smith's levels of civilization exemplified. Due to a perceived waste of the land on which they lived, many Europeans deemed indigenous peoples to be savage and ignorant. Zunshine and Fowkes Tobin both discuss that such perceptions were the result of a separation of indigenous peoples from their land when Europeans who hadn't seen the New World imagined the region. See Fowkes Tobin and Lisa Zunshine, "Eighteenth Century Print Culture and the "truth" of fictional narrative," *Philosophy and Literature* (2001).

<sup>106</sup> Wheeler, 36.

certain nations than in others, even though it may not be found in all the members of that nation.”<sup>107</sup>

Thus, it was up to the individual to prove his worth; respect was not conferred to whole groups, but it was to be earned. The philosophes thought that they had gained the respect of their peers through their own toil and logic.<sup>108</sup> Others were obliged to follow the same path, despite cultural barriers, in order to attain reason.

### **Scientific voyages in the Age of Reason:**

Perhaps no other aspect of the Enlightenment best represents the interaction between the ideal of reason, increased interest in empirical observation, and encounters between indigenous persons and Europeans than the voyages of discovery. From all over Europe, voyages set out not to engage in conquest or domination, but for the sake of gaining knowledge with which to better understand the natural world.<sup>109</sup> Among other measurements and data, the voyagers also included information about indigenous peoples in their accounts that would become the basis for subsequent Enlightenment racial discourse. It is to the perceptions of indigenous cultures in travel accounts that we now turn.

Carl Linnaeus had been one of the earliest proponents of travel for empirical research. He went as far as Lapland in 1732 to do field research on botanical samples which helped him to develop his system of binomial nomenclature.<sup>110</sup> Beyond his personal travels, he sought to recreate the entire botanical world for the economic benefit of his native Sweden. From his professorship in Uppsala, Linnaeus sent nineteen students around the world to gather samples for him. His students journeyed to the Cape of Good Hope, Java, Sri Lanka, Japan, the Levant, Russia, the Caucasus, Kazan, the Arctic Sea,

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<sup>107</sup> Denis Diderot and Jean Le Rond d'Alembert, *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers, par une Société de Gens de lettres*, ARTFL Project Encyclopédie, <http://encyclopedie.uchicago.edu/> (16 April, 2010). Translation into English is from same source.

<sup>108</sup> Some Enlightenment thinkers did object to the spread of empire, but that did not imply that they in any way considered indigenous peoples as equal to themselves. For more on the Enlightenment anti-imperial movement see Muthu.

<sup>109</sup> Fergus Fleming *Off the Map: Tales of Endurance and Exploration* (New York: Atlantic Monthly Press, 2004), 119. See Pagden, *Rhetoric of Empire*; See also Commager, *The Empire of Reason*.

<sup>110</sup> Blunt, 42.

India, China, Senegal, Sierra Leone, as well as throughout Spain's colonial holdings and the Pacific Ocean on two of Captain Cook's circumnavigation's of the earth.<sup>111</sup>

Botanists were not the only explorers interested in venturing onto the oceans of the world in search of knowledge. On his first voyage, Cook, a decorated member of the British navy, took not only Linnaeus' pupil Daniel Solander, but also included "two draughtsman, Sydney Parkinson and Alexander Buchanan; ... a surgeon, William Monkhouse; an astronomer, William Green...and in charge of them all, a young botanist named Joseph Banks."<sup>112</sup> The entire voyage was planned in order to participate in an international effort to see the transit of Venus, when the planet of Venus was predicted to pass across the sun and would be visible from Earth.<sup>113</sup> By observing the transit from various places around the globe, measurements could be made that would allow for the calculation of the distance between the earth and other planets--"measurements that were of interest both to scientists and to navigators."<sup>114</sup> The voyages of discovery ventured forth not only to bring back empirical research pertaining to the natural world, but also sought to practically apply empirical methods for political, economic, and imperial purposes. Fleming describes the national and personal desire to discover as, "to understand

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<sup>111</sup> Koerner, 151-152. For more on Linnaeus' funding of his students' trips see also Koerner's biography of Linnaeus, *Linnaeus: Nature and Nation*, (Cambridge: Harvard University Press, 1999).

<sup>112</sup> Fleming, 149. Joseph Banks, of course, would become the leader and patron of England's own exploration institution that would send voyagers around the globe well into the nineteenth century in search of new lands and natural history knowledge. For more on him and his natural history see David Philip Miller and Peter Hanns Reill, eds. *Visions of Empire: Voyages, botany, and representations of empire* (Cambridge: Cambridge University Press, 1996).

<sup>113</sup> Other voyages were launched to various places around the world to mark the 1761 transit. Jean-Baptiste Chappe d'Auteroche was sent to Siberia, Jeremiah Dixon and Charles Mason to the Cape of Good Hope and Guillaume Le Gentil to Pondicherry, India. See Timothy Ferris, *Coming of Age in the Milky Way* (New York: Harper Collins, 2003), chapter 7; Robert Mentzer, "Running the Line: The Astronomy of Mason and Dixon," *Mercury* 35, no. 6 (2006). For the Dutch contribution to the international effort see D. W. Kurtz, *Transits of Venus: New Views of the Solar System and Galaxy* (Cambridge: Cambridge University Press, 2004). Also, various scientists from around the world shared data about the Transit to check each other's calculations, or discredit them as in the case of Audiffredi and Pingré. See Luisa Pingatto in *Transits of Venus: New Views of the Solar System and Galaxy*, 74-86.

<sup>114</sup> Fleming 149. For more on the planning of the Cook Transit Voyage, see Andrew C. Cook "James Cook and the Royal Society," in *Captain Cook: Explorations and Reassessments*, ed. Glyndwr Williams (Woodbridge, Suffolk, UK: Boydell Press, 2004). For more on Cook's specific political, economic, and imperial motives see J. Gascoigne, *Captain Cook: Voyager Between Worlds* (London: Hambledon Continuum, 2007).

properly the world's workings, they [explorers and natural philosophers] had first to learn more about its undiscovered regions."<sup>115</sup>

The Cook expeditions are particularly revealing in that they combined the natural philosophers' search for knowledge with Cook's political motivations to claim the lands he found for Britain. Another aspect of the Cook voyages that are particularly important for understanding how the voyages of discovery influenced the perception of indigenous peoples is the prolific amount of printed material that the voyages produced. Although this will be explored in more depth later in this study, a preliminary overview will be useful to understand why travel accounts are important. Not only did Cook himself publish an account of his experiences in the interlude between his first and second voyages,<sup>116</sup> but so did Joseph Banks and the Forsters, naturalists who joined Cook's second voyage, among others. Their accounts, published in the 1770s and 1780s, joined an already burgeoning genre of travel accounts from navigators and natural philosophers alike. In addition to the memoirs of the participants, their European correspondents also wrote accounts based on their information, such as Linnaeus in Uppsala and Buffon in Paris.

Linnaeus and other non-travelers like Buffon were what Londa Schiebinger has termed armchair naturalists, while his traveling students were, "voyaging botanists."<sup>117</sup> Although there were "deep divides" between the practices and methods of these botanists, they did share the information brought back by the voyagers with the armchair naturalists. Such shared information created a sort of organizing filter through which all information about the New World passed to both philosophes and the reading public. It is also through such gatekeepers of knowledge that perceptions of indigenous Americans passed into European consciousness. The existence of a limited and shared information bank helped

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<sup>115</sup> Fleming, 119. Of course, discovery here refers to European discovery. See also Pagden, *Rhetoric of Empire*, 6.

<sup>116</sup> John Hawkesworth, *An Account of the voyages undertaken by the order of His Present Majesty, for making discoveries in the Southern Hemisphere* (London: W. Strahan and T. Cadell, 1785). Cook wrote and published his journals with the help of John Hawkesworth, which he would later regret. See Philip Edwards *The Story of the Voyage* (Cambridge: Cambridge University Press, 1994).

<sup>117</sup> Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (2004), 24.

create a reflexive discourse about race that centered upon the proper use of reason, the outline of which was explained in the previous section. How such a discourse was created is what I will now expand upon in light of a specific voyage of discovery that would prove particularly influential in the racial discourse of the Enlightenment.

### **Case Study: The La Condamine/Ulloa and Juan expedition**

While Cook participated in an international effort to measure the transit of Venus, this was not the first such voyage where nations joined forces to measure huge tracts of land. Earlier in the century a different geographic and mathematical debate was raging over the shape of the earth. As Mary Terrall explains, “The earth’s shape received more attention from academicians than any other single problem in the 1730’s.”<sup>118</sup> At stake was far more than the shape of the Earth and the development of more accurate tools for sailors and navigators, but also a degree of national pride for the rival hypotheses of competing imperial powers.<sup>119</sup> Jacques Cassini, the Royal astronomer of France, maintained that the world was elongated at the poles and pinched at its waist, rather like a plump, belted man. Newton, however, had hypothesized that the world was flattened at the poles and bulged at the equator, a position maintained by the Royal Society in the eighteenth century. When Cassini sent one of his disciples, Jean Richter, to take measurements of longitude in Guiana, Richter’s data seemed to support the English hypothesis.<sup>120</sup>

In order to settle this scientific and political point of contention, the French Academy of Sciences organized two expeditions to measure longitude at strategic points on the earth’s surface. One team

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<sup>118</sup> Mary Terrall, “Heroic Narratives of Quest and Discovery,” *Configurations* 6.2 (1998), 227.

<sup>119</sup> Gianni Guadalupi and Antony Shugaar, *Latitude Zero: Tales of the Equator* (New York: Carroll and Graff Publishers, 2001), 57; Edward J. Goodman, *The Explorers of South America* (New York: The MacMillan Company, 1972), 183; Avraham Ariel and Nora Ariel Berger *Plotting the Globe: Stories of Meridians, Parallels, and the International Date Line* (Westport, CT: Praeger Publishers, 2006), 20.

<sup>120</sup> Fleming, 138. Terrall also points out that certain factions within the French Royal Society were Newtonians themselves and therefore supported the ensuing voyages in order to discredit previous measurements that were made only by Cassini’s team. See Terrall, “Historic Narratives of Quest and Discovery,” 227. John L. Greenburg interpreted the voyages as efforts to definitively settle the debate over the proper approach to scientific experimentation. As he wrote, “The real issue revolved around the question whether to regard theories as the servants of facts, or vice versa.” John L. Greenberg, “Degrees of Longitude and the Earth’s Shape: The Diffusion of a Scientific Idea in Paris in the 1730’s,” *Annals of Science*, 41 (1984), 152.

was to sail north and measure longitude close to the poles in Lapland. This expedition was led by Pierre Louis de Maupertius, a mathematician and Newtonian.<sup>121</sup> To examine whether the equator bulged or was oblong, a group of French academicians were sent to Quito, Ecuador in the Spanish Viceroyalty of Peru. Expedition members included: Pierre Bouguer, astronomer; Louis Godin, mathematician and appointed leader; Jean Godin des Odonais, his cousin and a mathematician in his own right; Captain Verguin of the French navy; M de Morainville, draughtsman and artist; Joseph de Jussieu, botanist; Jene Seniérgues, physician; M. Hugot, technician and watchmaker; M. Mabillon, general traveler; M. Couplet, nephew of French Academy treasurer; and last but certainly not least, Charles-Marie de la Condamine, soldier, traveler, and chemist.<sup>122</sup>

Due to the expedition's intended terminus inside Spanish America, permission was needed from the Spanish monarchy to allow foreigners into previously closed colonial possessions. However, as the War of the Spanish Succession had left a Bourbon King on the throne of Spain, permission was granted in August, 1734 with the issue of royal cédulas and papers assuring the academicians safe passage and funds from the Royal Treasury.<sup>123</sup> Permission came with a caveat, however; two Spanish naval lieutenants were to be attached to the mission in order to smooth relations with colonial officials, as well as to help with the calculations of the academicians. Twenty-two year old Jorge Juan y Santacilia and nineteen year-old Antonio de Ulloa, both of the elite Guardia Marina, were chosen to travel in different vessels to meet up with the French contingent in Cartagena in order to begin their measurements in 1735.

Like the original scientific debate that fueled the expeditions, the appointment of Ulloa and Juan had political implications. For nearly a century, Spain had been seen as Europe's backwater, especially as

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<sup>121</sup> For more on Maupertius and his influence on Enlightenment science see Mary Terrall, *The Man Who Flattened the Earth: Maupertius and the sciences in the Enlightenment* (Chicago: University of Chicago Press, 2002).

<sup>122</sup> Fleming, 139; Guadalupi and Shugaar, 57.

<sup>123</sup> A. LaFuente and A. Mazuecos, *Los Caballeros del punto fijo. Ciencia, política y aventura en la expedición geodésica hispanofrancesa al virreinato del Perú en el siglo XVIII* (Quito, Ecuador: Abya Yala, 1992), 87-90; Goodman, 184; Asensio, 65; Jorge Juan and Antonio de Ulloa, *Edición Anotada del Texto Original de las "Noticias Secretas de América," de Jorge Juan and Antonio de Ulloa*, ed. Luis J. Ramos Gómez (Madrid: Instituto Gonzalo Fernández de Oviedo, 1985), 8.

far as intellectual achievement was concerned.<sup>124</sup> When describing the state of academia in Spain in his *Teatro Crítico Universal*, Benito Jerónimo Feijoo despaired, “In effect, there is no sufficient science, or art, that can make life easier for humanity, in that it is not advancing much, and it is not advancing each day.”<sup>125</sup> As Asensio puts it, “At the beginning of the eighteenth century, Spanish science occupied a very secondary place in the European context.”<sup>126</sup> The Guardia Marina, founded in 1716, had specifically been designed to teach young soldiers the newest natural philosophy and math had to offer.<sup>127</sup> The goal was to train military officers who could then be assigned to colonial holdings and military outposts in order to bring the whole of the Spanish empire into the Enlightened Age. It was also to be an organization which could provide more scientifically-minded ambassadors to the rest of Europe, for “the Spanish Enlightenment was a patriotic movement” bent on proving Spain’s intellectual ability.<sup>128</sup> In such a vein, Juan and Ulloa were also charged with bringing back information about Spanish colonial holdings on behalf of the crown, which was later written into a private report for the monarch and his advisors.<sup>129</sup>

The stage was thus set for the first truly international voyage of discovery of the Enlightenment.<sup>130</sup> However, it was not an easy journey. The French academicians landed in Cartagena in November 1735, from where they traveled to Panama City and then most of the party continued to

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<sup>124</sup> Asensio, 66; Hontanilla, 125; María Ángeles Pérez Samper, *La España del Siglo de las Luces* (Barcelona: Editorial Ariel, 2000), 15; Lafuente, et al., “Dinámica Imperial de la ciencia: los contextos metropolitan y colonial en la cultura española del siglo XVIII,” in *El Reformismo Borbónico*, ed. Agustín Giumerá (Madrid: Alianza Universidad, 1996), 179-180; For a detailed discussion of the attempts by Bourbon Spain to redefine their scientific status through the Enlightenment voyages of discovery, see Lafuente and Mazuecos, chapter 5.

<sup>125</sup> Benito Jerónimo Feijoo, *Teatro Crítico Universal* (Madrid: 1785), vol. XI, 378, translation made by author. Feijoo’s *Teatro Crítico* was first published in 1726, though it was not finished and printed in its entirety until 1739, of which the volume above is a later edition.

<sup>126</sup> Asensio, 63, translation made by author.

<sup>127</sup> Irving A. Leonard, “Introduction,” in *A Voyage to South America* Jorge Juan and Antonio de Ulloa (New York: Alfred A. Knopf, 1964), 3.

<sup>128</sup> Esguerra, 30, translation made by author.

<sup>129</sup> This report would become the famous *Noticias Secretas*, published privately and circulated only within the Spanish government until it was leaked and published by the Englishman David Barry in 1826. For an informative look at the publishing of the *Noticias Secretas* see John J. TePaske, “Introduction,” in *Discourse and Political Reflections on the Kingdoms of Peru* Jorge Juan and Antonio de Ulloa (Norman, OK: University of Oklahoma Press, 1978).

<sup>130</sup> Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation* (New York: Routledge, 1992), 16.

Guayaquil.<sup>131</sup> La Condamine, however, decided to make calculations and observations of the area's astronomical phenomena. Accompanied by Bouguer, with whom he did not get along, the two tried in vain to make any observations while progressing along the perpetually foggy coast.<sup>132</sup> Eventually joined by the governor of the nearby province of Esmeraldas, Pedro Maldonado, La Condamine and the newest addition to the mission traveled overland to Quito.<sup>133</sup> Bouguer opted for the less arduous Guayaquil route. Reunited in Quito, the scientists got down to the goal of their mission, to measure the arc of a degree of longitude. Just arriving in Quito was no easy task, as Antonio de Ulloa described, "All that had been achieved in the year it took to get to Quito, if only the difficulties of our journey that put us in this country where we have to perform our principal work with which we have been charged, is no small achievement, as we have mediated such a long distance, and such a variety of climates."<sup>134</sup> After a brief respite, they established a baseline on the barren plains of Yarqui from which to measure an arc of the meridian. En route, however, the expedition suffered its first casualty. Couplet, the nephew of the treasurer of the Royal Academy of Sciences, succumbed to fever on September 17, 1736.<sup>135</sup>

Under intense scrutiny from the officials and inhabitants of Quito, La Condamine and Jorge Juan found it necessary to journey to Lima to obtain certain assurances from the captain-general of Peru.<sup>136</sup> After an absence of eight months, the duo returned to Yarqui and the measurements finally began in earnest in July 1737. For two years the ten men climbed volcanoes, endured extreme cold and intense heat, and calculated several triangulations from their initial baseline in order to correctly gauge the

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<sup>131</sup> Charles-Marie de la Condamine, *Diario del viaje al Ecuador*, trans. Eloy Soria Sanchez (Quito: Coordinación General del Coloquio "Ecuador 1986", 1986), 5.

<sup>132</sup> Jorge Juan and Antonio de Ulloa, *Relación Histórica de un viaje a la América Meridional* (Madrid: Antonio Marín, 1748), 144-145; Fleming 141. Indeed many authors have remarked upon the bickering and resentment that permeated the French group. See Leonard, Asensio, Goodman, and Guadalupi and Shugaar, among others. In their printed works the authors are reticent as to their mutual disdain; however, La Condamine and Bouguer did engage in a lively disagreement over results when both men were racing to publish after their separate returns to France in the early 1740s. For more on that exchange see Asensio, chapter 7.

<sup>133</sup> Charles-Marie de la Condamine, *Relation Abrégée d'un voyage fait dans l'intérieur de l'Amérique Méridionale* (Paris: Chez la Veuve Pissot, 1745), 58; La Condamine, *Diario del viaje al Ecuador*, 12; Ariel and Berger, 28.

<sup>134</sup> Juan and Ulloa, *Relación Histórica*, 302.

<sup>135</sup> Fleming, 142.

<sup>136</sup> Juan and Ulloa, *Relación Histórica*, 305.

distance between degrees of longitude in the equatorial region. However, the final calculations were interrupted in June 1739 by a message from France about their northern counterpart, Maupertius. The Lapland voyage had returned to France to report that the Newtonians were correct, the poles were slightly flattened and degrees of longitude were shorter closer to the poles.<sup>137</sup>

Although their scientific charge had been nullified, the academicians continued to complete their measurements.<sup>138</sup> However, things also continued to degrade for the French academicians. While staying in Cuenca, the surgeon, Seniérgues, became involved in a local marriage dispute involving a wealthy family and her fiancé. At a public bull fight, the owner of the arena called Seniérgues' honor into question with regard to his involvement in Cuencan affairs. Seniérgues stood to respond and the owner declared the bull fight suspended at which point the crowd surged toward Seniérgues and killed him.<sup>139</sup> La Condamine was outraged and instigated court proceedings that were to result, after a year of litigation, in the conviction but not imprisonment of the alcalde, the owner of the arena, and the fiancé. Meanwhile, the group's botanist, Jussieu, had a nervous breakdown due to the accidental destruction of all of his samples from the expedition thus far. Mabillon had also gone mad. Hugot, the watchmaker and technician who had overseen the group's many instruments, married into a Peruvian family. Godin de Odonais also married a young girl from Riobámba and his cousin accepted a professorship at the University of San Marcos in Lima.<sup>140</sup>

While the French contingent of the expedition was dying, marrying, and going crazy, the two Spanish naval lieutenants were busy seeing a wider swath of the Spanish colonial holdings than they originally intended. Upon first arriving in Quito, Ulloa quarreled with the president of the Audiencia of Quito over his informal tone in addressing the younger Ulloa. This resulted in a challenge by Ulloa, followed by a warrant for his arrest, his sanctuary in a local church, and Juan's traveling to Lima to plead

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<sup>137</sup> La Condamine, *Diario del viaje al Ecuador*, 53-54; Guadalupi and Shugaar, 61.

<sup>138</sup> La Condamine, *Diario al Ecuador*, 44-46.

<sup>139</sup> Ibid. 63; La Condamine, *Diario al Ecuador*, 72.

<sup>140</sup> Fleming, 144.

for his partner's freedom.<sup>141</sup> Aided by an order of free conduct from the viceroy of Peru, Juan and Ulloa assisted in the measurements until October 1740, when the lieutenants were called to service upon news that the British Admiral Lord Anson was menacing the South American coast as part of hostilities that would become the War of Jenkin's Ear.<sup>142</sup> When in August 1740 Bouguer and La Condamine finished their final baseline measurement, they were two of only three of the original ten Frenchmen who would return to Europe after a journey considerably longer than the original two years that they were given by the Academy of Sciences.<sup>143</sup>

It was also during this time that La Condamine ordered the construction of two pyramids to commemorate the measurement of the baseline. This would cause problems not only with the already-angered Cuencan officials, but also with Ulloa, Juan, and the captain-general of Peru. La Condamine had omitted the contributions of the Spanish Crown and the Spanish lieutenants, although he added the French fleur-de-lis to the inscription. Juan and Ulloa returned just in time to become involved in the dispute over the proper wording of the inscription and, in 1742, the Audiencia de Quito ordered the names and ranks of Juan and Ulloa included and the fleur-de-lis removed.<sup>144</sup>

After the conflict of the pyramids dissipated, the members of the expedition began to sail for home. In 1743, Bouguer and Verguin journeyed overland to Cartagena and then booked passage to France.<sup>145</sup> La Condamine, however, chose to create an updated map of the Amazon River Basin, a subject that had intrigued him because of accounts he had heard of from Maldonado and the Jesuit academics with whom he stayed during his travels. In May, 1743 he left Cuenca and traveled overland to Mainas, where he joined Maldonado.<sup>146</sup> Together they floated down the Amazon taking botanical samples, charting the river, and noting the practices of the indigenous peoples. After a brief stay in Pará

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<sup>141</sup> TePaske, 18-19.

<sup>142</sup> Leonard, 7-8.

<sup>143</sup> The third would be Captain Verguin of the French Navy.

<sup>144</sup> TePaske 20-21. For an in-depth study of the pyramid controversy see Asensio, chapter 3 and 5.

<sup>145</sup> Guadalupi and Shugaar, 64.

<sup>146</sup> La Condamine, *Diario del viaje al Ecuador*, 153: Anita McConnell, "La Condamine's Scientific Journey down the River Amazon, 1743-1744," *Annals of Science*, 48 (1991), 7.

to make pendulum measurements, the men parted ways when Maldonado sailed for Lisbon on December 3, 1743. La Condamine continued alone with Indian guides to Cayenne. He sailed on August 22, 1744 for Paramaibo and left for Amsterdam on September 3.

Ulloa and Juan, again called into military duty after the pyramid polemic, returned to Quito in January, 1744. Finding only Louis Godin still in the area, the Spaniards completed their own measurements of the meridian and then all three journeyed to Lima, where Godin was to teach. Finally, on October 22, 1744, the final two members of the original expedition set sail from Callao on separate ships so as to ensure that at least one set of their notes made it home.<sup>147</sup>

Although its entertainment value as a historical anecdote is undeniable, this particular voyage is of interest in the study of racial discourse in the Enlightenment for several reasons. First, like Cook's voyages, many of the members of the expedition published accounts of their works. This which provides several entry points into an examination of the perception of indigenous peoples by the authors, as well as in analyzing how those perceptions were communicated to a reading public. For this study, primacy will be given to the account by Charles Marie de la Condamine and the account published by the Spanish naval lieutenants, Jorge Juan and Antonio de Ulloa. Both were published within three years of each other (1745-1748), were quickly translated into several languages, and went through several editions by the end of the century.<sup>148</sup> For this study, I will examine the first English translation of La Condamine's *Relation abrégée d'un voyage fait dans l'intérieur de l'Amérique Méridionale*, published in 1747.<sup>149</sup> Juan and Ulloa's text, *Relación Histórica del Viaje a la América Meridional* was published in 1748.

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<sup>147</sup> Leonard, 9. It is a good thing they did travel separately, for Ulloa's boat, the *Notre Dame de Bonne Déliverance*, was seized by the British en route. However, this allowed him to enter London as a scientific hero, gain notoriety as a Fellow of the Royal Society, and combat the assumption of Spanish intellectual inferiority. See TePaske, 22-23. It is debatable that these two really represented the final members of the voyage to make it home, for Godin de Odonais also returned to France with his Peruvian bride after a thrilling adventure of their own. See Guadalupi and Shugaar, 65-74 and Anthony Smith, *The Lost Lady of the Amazon: The Story of Isabela Godin and Her Epic Journey* (New York: Carroll and Graf Publishers, 2003).

<sup>148</sup> Safier, *Measuring the New World*, 58; Leonard, 11. The details of the publishing of the works will be addressed in the next section of this essay as well.

<sup>149</sup> Charles-Marie de la Condamine, *A succinct abridgement of a voyage made within the inland parts of South-America, from the coasts of the South-sea, to the coasts of Brazil and Guiana, down the river of Amazons: as it was read in the public assembly of the Academy of Sciences at Paris, April 28, 1745 by Mons. de La Condamine; to which is annexed, a map of the Maranon, or river of Amazons, drawn by the same* (London: E. Withers, 1747).

Furthermore, both accounts were not only published but also presented to academic societies across Europe, which allowed their findings to be communicated to the highly educated as well as a broader reading public. This fact suggests a broad reception of their interpretations of indigenous peoples in America. There is a second aspect that makes this journey particularly applicable to analysis; the expedition had international participants, which allows for a comparison of viewpoints of indigenous peoples on a broader, transnational scale.

Of La Condamine's writings, Reidy et al. wrote, "His account highlights his own cultural predilections, a set of biases that provided the backdrop for similar questions posed by philosophes back in Paris concerned with man in a state of nature. His account of his travels set the stage for European ethnographic studies of native populations for more than a century."<sup>150</sup> Brading agrees when he writes of the, "...all-pervasive effect influence of that expedition on subsequent discussion of the American Indian."<sup>151</sup> The travelers set-off with great public interest as part of an international effort to settle the shape of the Earth.<sup>152</sup> They corresponded throughout the journey with their governments, as well as with philosophes like Voltaire.<sup>153</sup> Once they returned, La Condamine and Ulloa continued to publish works on their travels for thirty years, providing a constant stream of information that continued to influence the racial discourse of the Enlightenment from the 1730s to the 1770s. The Peruvian geodesic expedition was thus a formative influence, but was itself simultaneously influenced by the extant racial discourse of the Enlightenment.

### **Perceptions of Race in the published accounts of La Condamine**

La Condamine returned to France via Amsterdam in 1744, eager to present his findings and experiences over the past ten years. There was only one problem, others had already done so. As the

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<sup>150</sup> Reidy et al., 46.

<sup>151</sup> Brading, 436.

<sup>152</sup> La Condamine, *A succinct abridgement*, vii.

<sup>153</sup> Asensio 58-59; Safier, *Measuring the New World*, 207; For the exchange between Voltaire and La Condamine during the voyage see Lafuente and Mazuecos, 67, 88; For an account of the planning of the geodesic voyage, see Mary Terrall, *The Man Who Flattened the Earth*, chapter 4, especially 94-95.

academicians knew while completing their own measurements in Quito, the Maupertius expedition had returned from Lapland to settle the controversy of the earth's shape firmly for the Newtonians.<sup>154</sup>

Maupertius published his findings in two books in 1738. The first, *La figure de la Terre déterminée par les observations du monsieur du Maupertuis, Clairaut, Camus, Le Monnier, de l'Académie Royale des Sciences & de m. l'Abbe Outhier correspondant de la même Académie, faite par ordre du Roy au Cercle Polaire*, was quickly translated into English as well.<sup>155</sup>

Perhaps more troublesome for La Condamine's publishing ambitions, a member of his own expedition, Pierre Bouguer, had already released an account of their findings. Bouguer had arrived in Paris practically a year before La Condamine and quickly presented his findings to the Royal Academy in 1744. His account was published just before La Condamine's own in 1745.<sup>156</sup> La Condamine knew that he could not hope to bring much new light on this scientific conversation or on the rough outline of the expedition's work in measuring the meridian, as he explained in his Preface to his own account:

The public have been several years informed, of the success of those members of the academy, who made their observations under the *Polar Circle*, and in our climates; and M. *Bouguer*, who arrived in *France* before me, has given an account to the public assembly, of the academy, on *November 14, 1744*, of the result of ours, under the *Equinoctial Line*...<sup>157</sup>

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<sup>154</sup> Maupertius' road to publishing was rather fraught with difficulty and controversy. For a detailed account of the political wrangling and debates surrounding the return of the Lapland expedition and their presentation of their findings see Élisabeth Badineter, *Las pasiones intelectuales. Los deseos de Gloria (1735-1751)* (Buenos Aires: Fondo de Cultura Económica, 2007), chapter 3.

<sup>155</sup> P. L. M. Maupertius, *La figure de la Terre déterminée par les observations du monsieur du Maupertuis, Clairaut, Camus, Le Monnier, de l'Académie Royale des Sciences & de m. l'Abbe Outhier correspondant de la même Académie, faite par ordre du Roi au Cercle Polaire* (Paris: Imprimerie Royale, 1738); P. L. M. Maupertius, *Relation du Voyage fait par ordre du Roi au Cercle Polaire pour déterminer la figure de la Terre* (Paris: 1738); P. L. M. Maupertius, *The figure of the earth determined from observations made by order of the French King, at the Polar Circle by Messrs. de Maupertius, Camus, Clairaut, Le Monnier, the Abbé Outhier, and Mr. Celcius; translated from the French of M. de Maupertuis* (London: Press of T. Cox, C. Davis, J. P. Knapton, and A. Milliam, 1738).

<sup>156</sup> Pierre Bouguer, "Relation abrégée de Vuyage fair au Pérou par Messieurs de l'Academie Royale des Sciences, pour mesurer les degrés du meridian aux environs de l'équateur et en conclure la figure de la Terre" en *Historie de l'Academie Royale des Sciences avec les méoires de mathématique et de physique pour le même année tirés des registres de cette académie-Année 1744* (Paris: Imprimerie Royal, 1745). La Condamine actually published a brief account of his travels in Spanish while waiting in Amsterdam in late 1744. This was published as *Extracto del Diario de Observaciones hechas en el viaje de la Provincia de Quito al Pará, por el Rio de las Amazonas* (Amsterdam: 1745). However, this was part of a small printing intended for his Spanish friends based of his personal journals and was not intended for the broad public as was the *Relation abrégée*. McConnell, 15. In addition, a complete copy of the *Diario* was not available for this study.

<sup>157</sup> La Condamine, *A succinct abridgement*, vii-viii. All italics are in the original text, unless otherwise stated.

Rather than repeat the scientific findings of his fellow traveler or revisit the now somewhat less controversial subject of the shape of the earth, La Condamine instead chose to publish an account of his travels that were performed without his fellow Frenchmen, his navigation of the Amazon River. As he continued, “The question of the earth’s figure being decided, and the curiosity of the public abated upon that head, I thought to excite it somewhat more...by a succinct account of my voyage, upon the river of the *Amazons*...”<sup>158</sup> La Condamine wrote this account for a broader public interested in voyage accounts, but also to explain natural philosophy experiments that he mentions throughout the book.<sup>159</sup>

That account, according to Neil Safier, “was at once an ethnography, a natural history, an Amazonian bestiary, a study in geography and hydrography, a historical and mythological tract, and a descriptive account of a massive river system, all tied together in a single package and narrated in a loosely chronological fashion.”<sup>160</sup> The indigenous peoples that are included in his account are laborers or figure only in the background. An indigenous person is never the focus of La Condamine’s narrative; in Neil Safier’s apt words, La Condamine “papered over” the indigenous presence in his text.<sup>161</sup> However, the instances in which indigenous peoples do appear leave the reader with the idea that Indians are naturally indolent and are unable to learn the necessary qualities that European men considered reasonable. They are objectified in a way that reinforces the supremacy of European’s mastery of empirical methods and the absence of these qualities among indigenous peoples.

Although La Condamine must have been constantly in contact with the indigenous people who were hired to tote the expedition’s many instruments from site to site, the most common way that they appear in his writing is in a physical description. For example, Indians, when directed, could perform

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<sup>158</sup> Ibid, viii.

<sup>159</sup> McConnell, 15; Neil Safier, “Unveiling the Amazon to European Science and Society: The Reading and reception of La Condamine’s *Relation abrégée d’un voyage fait dans l’intérieur de l’Amérique méridionale (1745)*,” in *Terrae Incognitae* 33 (2001), 40; See also Safier, *Mapping the New World*, chapter 2.

<sup>160</sup> Safier, “Unveiling the Amazon,” 38-39.

<sup>161</sup> Ibid, 63.

tasks with “admirable dexterity and speed.”<sup>162</sup> Such dexterity was only possible when the Indians were being commanded in their work by an intelligent overseer. They were not capable of ordering their own time and labor. When stuck in a hollow along the Amazon, La Condamine was helped out “through the dexterity of four *Indians*.” They were only able to help, however, because La Condamine had the foresight to keep the indigenous peoples with him and to tell them what to do with the canoes they had constructed.<sup>163</sup> La Condamine regarded the Indians around him as physical objects for labor, much like the pack animals that he used for their brute force.<sup>164</sup>

Similarly, La Condamine describes a man who works for him as, “an excellent swimmer, as indeed they all are.”<sup>165</sup> Positive physical descriptions abound about indigenous peoples, yet there is no attribution of mental abilities to the Indians in his account. Instead, the Indians must always be spurred on while in his employ, for they are “far from intrepid.”<sup>166</sup> The exaggerated emphasis on physicality led to a perception of Indians that “...overdetermined one set of discriminations and left much indistinctness” with regard to their mental capacity.<sup>167</sup> Based on this supposed inferiority, it was a matter of embarrassment when the Indians could do anything with more skill than the Europeans. When indigenous guides manage a swaying bridge better than La Condamine, he writes, “they [Indians] laugh to see a traveler boggle at it, which makes him soon ashamed, to shew less resolution than they.”<sup>168</sup> The reader is made to understand that to perform less skillfully than an indigenous person was shameful, although he does also imply that the Indians are lacking in sensitivity for laughing at the poor traveler.

In addition, instead of constantly exploring the world around them, as La Condamine cannot resist doing, the Indians seem to totally ignore the experimental possibilities around them. When he

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<sup>162</sup> La Condamine, *A succinct abridgement*, 17. See also *Ibid*, 31.

<sup>163</sup> *Ibid*, 19. A similar example is on page 58.

<sup>164</sup> *Ibid*, 10.

<sup>165</sup> *Ibid*, 15. For more on indigenous swimming ability, see *Ibid*, 44.

<sup>166</sup> *Ibid*, 13.

<sup>167</sup> Nicholas Thomas, “Liberty and License: The Forsters’ Accounts of New Zealand Sociality” in *Transports: Travel, Pleasure, and Imaginative Geography, 1600-1830*, eds. Chloe Chard and Helen Langdon (London: Yale University Press, 1996), 259.

<sup>168</sup> La Condamine, *A succinct abridgement*, 13.

examines the poison darts used by indigenous hunters, La Condamine can hardly contain his curiosity to discover the most effective antidote, yet he does not even think to consult the Indians as to how they have traditionally protected themselves. The idea that the indigenous peoples would have experimented on such subjects was unthinkable.<sup>169</sup> Later, when he finally does perform his experiments on the venom in a public demonstration before professors at Cayenne, no Indians are present. La Condamine does compare Indians who prepared the poison to European apothecaries in the care they give to its preparation; however, La Condamine attributes this ability to simply following ancient tradition.<sup>170</sup> Further proof of their limited capacity to understand natural phenomenon was La Condamine's disdain for the fear his Indian rowers have of the irregular tides caused by the coming of spring. Although the specifics of lunar-tidal connections were still being debated within European academies and scientific circles, La Condamine scoffs at the "fear" of the Indians.<sup>171</sup> He cannot resist mentioning their "little experience and timidity" and complains that their limited mental ability is an inhibition to his work.<sup>172</sup>

La Condamine's disdain for indigenous peoples encompassed the defects of their languages and the limitations that they posed for intellectual accomplishment. When discussing native languages La Condamine explains:

*Poettarrarorincouroac* signifies, in their tongue, the number three; fortunately for those who have to do with them, their arithmetic goes no farther; and how incredible soever it may seem, this is not the only *Indian* nation that is in this case.<sup>173</sup>

Indigenous peoples are presented as "unpolished" and demonstrating a major "deficiency" in their math and language skills, two subjects that a civilized person would need to have mastered in order to show

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<sup>169</sup> Ibid, 34.

<sup>170</sup> Ibid, 104-105.

<sup>171</sup> Ibid, 98. Newton's Law of Gravitation helped to explain the long understood correlation between the tides and lunar cycles, although these correlations are harder to observe on the Amazon for tides are delayed as they travel up the length of the river. For more on Newton's tidal work see Isaac Newton and Edmund Halley, "The True Theory of the Tides, Extracted from That Admired Treatise of Mr. Isaac Newton, Intituled, Philosophiae Naturalis Mathematica; being a Discourse Presented with That Book to the Late King James," *Philosophical Transactions (1683-1775)* 19 (1695).

<sup>172</sup> La Condamine, *A succinct abridgment*, 94.

<sup>173</sup> Ibid, 33.

the quality of reason.<sup>174</sup> La Condamine continues, “*Time, duration, space, being, substance, matter, and body*, all these words, with many others, have no term equivalent to them in their speech: and not only the names of metaphysical essences, but even those of moral ones, cannot be expressed by them, but imperfectly, and by long circumlocutions.”<sup>175</sup> No doubt La Condamine did not expect to find indigenous philosophers capable of discoursing with Leibniz and Spinoza, but the complete lack in their language of words for abstract and moral categories clearly disqualified them from participation in serious reasoning.

An inability to talk about abstract moral concepts was related in La Condamine’s mind with the degraded moral values of indigenous peoples. He stated, “I know that all, or most part, of the *Indians of South America*, are liars, credulous, and fond of any thing surprizing...”<sup>176</sup> Not only are Indians unable to speak of moral ideas, they are unable to practice them collectively. Though he does not rule out an individual’s ability to be educated, he is not confident that this would happen very often based on his belief in the “*Indians* natural propensity to lye and exaggerate.”<sup>177</sup>

Part of the lack of ability to learn how to reason in the European fashion was predicated on the assumption that indigenous peoples were lazy. Just as Buffon and de Pauw would later write, La Condamine observed indigenous peoples lying about in midday and ascribed such inactivity to the natural indolence of the indigenous race, “Nature seems to have favour’d the general propensity of the *Indians* to laziness.”<sup>178</sup> Environmental determinism is the main explanation that La Condamine employs to account for the differences between himself, a reasoning academician, and the indigenous peoples who seem so strange to his civilized eyes. In language that would later be echoed by Buffon, De Pauw, and Robertson, La Condamine attributes the “tawny, of a colour somewhat reddish” skin of indigenous

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<sup>174</sup> Ibid, 33.

<sup>175</sup> Ibid, 27.

<sup>176</sup> Ibid, 56.

<sup>177</sup> Ibid, 65. Interestingly, here La Condamine admits that the Indians may be lying to protect their land from prospecting Europeans. However, he does not actually sympathize with the indigenous people about their exploitation, he just remarks that the natural ability to lie may be serving the Indians’ own purposes well.

<sup>178</sup> Ibid, 79.

peoples as, “probably owing chiefly, to the different temperature of the air, in the several climates they inhabit, varying from intense heat, of the *torrid zone*, to the nipping cold, caused by the vicinity of the snow.”<sup>179</sup> Humans are not the only species that are affected by climate; La Condamine believed that “snakes and serpents of every kind should abound” in “climates so hot, and so moist, as those whereof we have been treating.”<sup>180</sup> Indians’ behavior and capacity to reason were also affected by this climate, making it unlikely that such natural attributes could be easily overcome.

La Condamine also postulated that indigenous social development was part of a greater human development cycle that progressed from savage Indians, to barbarism, to civilization, which is much like the 4-Stage Theory of Development later to be published by Adam Smith. La Condamine’s explanation of the diversity of indigenous culture is indicative of how he drew together several strings of the racial discourse of the Enlightenment and is worth quoting at length:

Besides, it may easily be imagined, that a nation, who have been Christians, and subject to the crowns of *Spain* or *Portugal*, for an age or two, must inevitably have learned some of the manners of their conquerors: and consequently, that an *Indian*, who lives in a town or village of *Peru*, must differ from a savage, in the inner parts of the continent; and even from a new inhabitant of the missions, lately settled upon the banks of the *Maranon*. It would be needful, therefore, in order to give any one an exact idea of the *Americans*, to make almost as many descriptions, as there are nations amongst them. Nevertheless, as all the *European* nations, though differing amongst themselves in tongues, manners, and customs, would still have somewhat in common to all of them, in the eyes of an *Asiatic*, who should examine them attentively; so all the *American Indians*, of the several countries, which I had an opportunity of viewing, in the course of my travels, have seemed to me, to have certain touches of resemblance...I have observed all of them, at the bottom, to be of one common temper, whereof insensibility is the basis.<sup>181</sup>

Although he does mention Christianity as part of the civilizing process, it is the length of the Indian’s exposure to European culture that categorizes the level of civilization of the indigenous person. A savage newly exposed to Europeans is not nearly as advanced as one who has been in contact with a European

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<sup>179</sup> Ibid, 25.

<sup>180</sup> Ibid, 84.

<sup>181</sup> Ibid, 25-26.

colony for several years. Thus, allowing for these distinctions, La Condamine groups all Indians into one insensible mass, a mass largely incapable of learning reason without the intercession of European education. Throughout his writing, the only indigenous peoples that receive a favorable reaction from the traveler are those who have adopted European ways. Therefore, he is “agreeably surprised to find” Indians in European clothing at the missionary in St. Paulo, for such proof of commerce with European areas gives these Indians “an air of ease” and they tend to show a higher capacity to understand European ideas.<sup>182</sup> He even correlates lower smallpox prevalence to the wearing of European clothes as opposed to the lack of clothing worn by indigenous peoples fresh from the jungle near the missions.<sup>183</sup>

Such comparison to and positive correlation with Europe as a superior model reveals La Condamine’s limited perspective. As Lisa Zunshine explains, La Condamine was “...attempting to contemplate truth not as a stable attribute but as an ongoing attribution, that is, not as an inherent *property* but rather as a dynamic *process* predicated upon functional idiosyncrasies of our evolved cognitive architecture.”<sup>184</sup> Surrounded by a world of new experiences, La Condamine was only able to order new information in the ways in which he had been taught, those of a reasonable gentlemen of the Enlightenment. Anthony Smith describes La Condamine’s observation process as, “An eighteenth-century European scientist, determined on investigation and then on change, was plainly at odds with the simpler life-style of the Amer-Indians whose means of living were long established.”<sup>185</sup> La Condamine looked for concepts that he could recognize as parallel to Europe’s in the language of the Indians and could not find the equivalent to “*time, duration, space, being, substance, matter, and body,*” as well as, “*virtue, justice, liberty, acknowledgment, ingratitude.*”<sup>186</sup>

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<sup>182</sup> Ibid, 45.

<sup>183</sup> Ibid, 92.

<sup>184</sup> Zunshine, 216.

<sup>185</sup> Anthony Smith, *Explorers of the Amazon* (London: Viking, 1990), 179.

<sup>186</sup> La Condamine, *A succinct abridgement*, 27.

Indigenous Americans simply did not live in the correct relationship to nature. For La Condamine, nature was to be studied and then mastered. Smith explains, ““It was not right, he [La Condamine] considered, for people to be so relaxed, in tune with the world, in keeping with nature.”<sup>187</sup> The Indians seemed content to live in harmony with nature and lacked the restless urge to improve their environment that characterized the European temperament.

La Condamine was deeply influenced by what he had already read about American peoples.<sup>188</sup> He had read of the decadent and advanced cultures of the Incas in the works of Garcilasco de la Vega, for which he had looked in vain upon his arrival in Lima. Where was the ancient advanced civilization about which he had read so much? La Condamine came to the conclusion that the indigenous peoples themselves were to blame for their perceived fall from glory, if indeed they had ever been as great as the Spanish chroniclers had made them out to be. He writes, “...it must be owned that the present inhabitants have greatly degenerated from the ancestors. As to the other nations of *South-America*, it is not known, that they have ever been any other than *Barbarians*.”<sup>189</sup>

From an analysis of La Condamine’s *A Succinct Abridgment of a Voyage Made Within the Inland Parts of South-America*, it is possible to see the process of the making of knowledge on the part of the author. La Condamine did not come to South America with a blank slate on which to write all his observations. He came with assumptions based on his education and correspondence with members of the Republic of Letters which helped to frame how he interpreted and reported upon the lives of the indigenous peoples he contacted. He found Indians to be useful physical laborers, but incapable of the advanced operations of reason. Through explanations of degeneration, climatic determinism, and a less-developed level of civilization, La Condamine constructed a view of indigenous peoples that was far from positive. To summarize his conclusions, he wrote that “the small number of their ideas” indicated

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<sup>187</sup> Smith, *Explorers of the Amazon*, 180.

<sup>188</sup> La Condamine, *A succinct abridgement*, 27; Brading, 423; Safier, *Measuring the New World*, 79.

<sup>189</sup> La Condamine, *A succinct abridgment*, 27.

indigenous peoples were “without regard to futurity; incapable of foresight and reflection...without meaning or design: thus they pass their lives without thought; and grow old, without having taken leave of infancy; all the failings whereof they retain.”<sup>190</sup>

### **Perceptions of Race in the published accounts of Jorge Juan and Antonio de Ulloa**

Charles-Marie de la Condamine was not the only one to discuss indigenous Americans at length in published works about the geodesic expedition to South America. The two Spanish naval lieutenants had both returned to Spain by late 1746. Ulloa came via England, where he had been taken after his vessel was captured off the coast of Newfoundland. Ulloa presented some of his findings and measurements to the Royal Society and was inducted as a Fellow on November 12, 1746, after his return to Spain.<sup>191</sup> Jorge Juan returned to Europe via Brest and then continued on to Paris. There, he presented his findings to the Royal Academy and became a corresponding member of that body in 1745.<sup>192</sup> Once joined by Ulloa, the two began to gather their notes and write an account of all that they had seen for King Ferdinand VI which, if satisfactory, would then be published at Royal expense.<sup>193</sup> Juan and Ulloa were also working on the clandestine *Noticias Secretas*, which would only be circulated within the higher levels of government. In the preface to the *Noticias Secretas*, they write:

The Marqués de Ensenada ordered us to put all the general information regarding the natural, moral and political history of those areas in the published part of the work available to ordinary

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<sup>190</sup> Ibid, 26.

<sup>191</sup> Asensio, 238; Brading, 426; Royal Society, “Fellows’ details: Antonio de Ulloa,” *The Royal Society Library and Archive Catalogue*, n.d., <http://www2.royalsociety.org/Dserve/dserve.exe?dsqIni=Dserve.ini&dsqApp=Archive&dsqCmd=Show.tcl&dsqDb=Persons&dsqPos=0&dsqSearch=%28%28Gender%3D%27Male%27%29AND%28Nationality%3D%27Spanish%27%29AND%28Surname%3D%27Ulloa%27%29%29> (25 April, 2010).

<sup>192</sup> TePaske, 22.

<sup>193</sup> Leonard, 10; José P. Merino Navarro and Miguel M. Rodríguez San Vicente, “Introduction,” in *Relación Histórica del Viaje a la América Meridional* (Madrid: Fundación Universitaria Española, 1978), xxviii. In reality, Ulloa wrote the bulk of the *Relación histórica*, with Jorge Juan only writing one section of the five that made up the *Relación histórica*. As the prologue says, “This material deals with the corresponding extension of the volume, which Don Jorge Juan has written...about the astronomical and physical observations made by him... and to me is all that pertains to history, and the successes of the Voyage.” Juan and Ulloa, *Relación histórica*, Prologue (no pagination in Prologue). All translations of the *Relación histórica* are made by the author, unless otherwise noted.

people, reserving those particular subjects for this tract, for the secret instruction of the ministers and those that that serve them.<sup>194</sup>

Thus, like La Condamine's *Relación abrégeé*, the *Relación histórica* was intended to be read by a broader reading public. As they state in the prologue to the *Relación histórica*, the authors hoped to succeed in "translating that which the Indians, Mestizos, and other species of peoples informed them of in good faith as true, and they would not modify any of it in presenting it to the public."<sup>195</sup> Juan and Ulloa were not only educating the public on the new kinds of people that they had contacted, but they promised the whole truth, without bias or interpretation. This is, however, not what happened. The perceptions of indigenous peoples in Juan and Ulloa's *Relación histórica* displayed the same negative perception of indigenous peoples that La Condamine had employed in his account, with a few caveats.

Unlike La Condamine, whose membership prior to sailing in the Royal Academy assured his place as a man of science and learning, the naval lieutenants were striving to prove both their own and their nation's scientific ability.<sup>196</sup> In the first paragraphs of the first book of the *Relación histórica*, Ulloa and Juan write of the respect they have for men of science, "In all times, people of power are to be instruments, from who derives the knowledge of some hidden truths, it has been for them to foment for the application; the daily determination, the tireless work, and the principal support, which has cemented the advances of the Sciences."<sup>197</sup> A major goal of the *Relación histórica* was to document the contributions of Juan and Ulloa, and thus Spain, to the measurement of the meridian, which previous French accounts had largely omitted.<sup>198</sup>

The desire to prove their scientific prowess led to a much more detailed account of the geodesic expedition than in other narratives. There are dense empirical studies of the flora, fauna, physical

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<sup>194</sup> Juan and Ulloa, *Relación histórica*, 30-31; Antonio Gutiérrez Escudo, "Antonio de Ulloa: Un científico ilustrado y su crítica opinión sobre el indígena americano," *Araucaria* 2, no. 3 (2000), <http://redalyc.uaemex.mx/redalyc/pdf/282/28220313.pdf>, 2.

<sup>195</sup> *Ibid*, Prologue (no pagination in the Prologue).

<sup>196</sup> Safier, *Measuring the New World*, 171, 196; Asensio, 15; See Weber, *Spanish Bourbons and Wild Indians*.

<sup>197</sup> Juan and Ulloa, *Relación histórica*, 3.

<sup>198</sup> Leonard, 12; Navarro and San Vicente, xxix; Asensio, 238.

geography, history, measurements of temperature, barometer, and many other experiments, as well as ample descriptions of the inhabitants of the cities and villages through which the academicians passed. There are also more physical descriptions of indigenous peoples than those that are to be found in La Condamine's account. Whereas the Frenchman focused on the mental capacity of Indians as they pertained to his own work, Ulloa and Juan focused almost exclusively on Indians as scientific objects to be observed. For example, Juan and Ulloa describe the shape of indigenous people's heads in Quito; they write, "imperfect [heads] abound" and describe their hairstyles as similar to dragons.<sup>199</sup> Much of the physical difference between races they described is reflective of the complex hierarchy of social standing based on skin color and heredity. For example, "The color of the *Mestizos* is dark, somewhat colored, though not as much as light *Mulatos*; these are of the first grade, or the procreation of a *Spaniard*, and *Indian*: some however are not so tanned, like the same *Indians*."<sup>200</sup>

Lineage distinguished social difference, which Ulloa and Juan describe in minute detail. When describing the social hierarchy of Cartagena, the authors describe the three main groups of people: blacks, whites, and Indians. However, arrayed between those of pure ethnic heritage are "*Mulatos*," "*Sambos*," "*Quaterones*," "*Tercerones*," and "*Quinterones*," each with a different amount of white and/or black blood marking their social status.<sup>201</sup> The stratification in Guayaquil was less complex due to the fewer number of black inhabitants, as was the case in Quito.<sup>202</sup> However, in Quito the Indians were separated into groups based on their acceptance of Christianity and the length of time they have lived in the city, which is reminiscent of La Condamine's assessment of Indians as better off the longer they had lived among missionaries.<sup>203</sup>

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<sup>199</sup> Juan and Ulloa, *Relación histórica*, 370.

<sup>200</sup> *Ibid*, 364.

<sup>201</sup> *Ibid*, 42.

<sup>202</sup> *Ibid*, 231.

<sup>203</sup> *Ibid*, 368.

Social stratification based upon racial heritage underlies other assumptions that the authors had with regard to indigenous peoples. The assumed difference and “Othering” of the Indians is predicated on their natural inability to think as Europeans do.<sup>204</sup> Juan and Ulloa thought that all Indians started from a point of total stupidity and were deprived of the advanced level of thought needed to learn the proper modes of reasoning. They write, “To see in present times these peoples possessed entirely of ignorance, filled with rusticity, and little separated from uncultivated barbarism, as has been noted in these, in practical mimicry of irrationality, they live apart in the country, make homes in the forest, and less cultured places.”<sup>205</sup> After centuries of exposure to the laws and culture of Spain, most Indians had not proven capable of grasping the civility and superior ways of life of the towns and villages of the colonies. In *Noticias Secretas* the inability of indigenous peoples to learn is blamed on an exploitative and harsh colonial governing system, but that critique is largely absent in the *Relación histórica*. This account leaves readers with the impression that indigenous peoples are naturally of a lower cognitive ability and unable to reason like Europeans.

The inability to learn was most evident to the authors in the sparse number of Indians who had bothered to learn Spanish. Instead of adopting *Castellano*, the Indians insisted on mixing their native languages with Spanish, which frustrated the authors. They write, “One can never bring them to reason...for it [suspicion of the Spanish language] is a general property among all Indians.”<sup>206</sup> Even children taken to learn at missions from a young age were not able to quickly assimilate the new language as young European children were. They were struck with the wonder of the new information, “when they begin to perceive the first syllables of the pronunciation, being of this language [Spanish], they are so impressed with it, that some do not speak Spanish, until they are five, or six years old; and

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<sup>204</sup> Tautz, 6.

<sup>205</sup> Juan and Ulloa, *Relación histórica*, 541.

<sup>206</sup> *Ibid*, 377.

they always keep a polluted style, and mix different languages in the same conversation.”<sup>207</sup> Without constant practice and forced compulsion to speak Spanish, Ulloa and Juan seem to think that indigenous peoples simply cannot keep information in their minds.

The weakness of their intellectual faculties was exacerbated by habitual drunkenness, according to Juan and Ulloa. Whenever Indians celebrated, they drank to excess and were useless for days on end.<sup>208</sup> To their drunkenness was added an innate laziness and lack of initiative. If any productivity is to be gotten from indigenous workers, “It is as much due to their idleness, and slowness, that their repetition is precise, in order to obtain a pair of shoes after a long time of having done so, take an Indian; give him the materials; shut him in, until he performs the task.”<sup>209</sup> As with La Condamine, the Indians were only useful if overseen and controlled by those who were naturally superior. Indeed, “all that can be attributed to them is barbarism, and a lack of reflection.”<sup>210</sup> For Juan and Ulloa, as for La Condamine, the limitations of race were a direct outgrowth of their assumptions about the superiority of reason and its central role in the Enlightenment project.

Ulloa and Juan did not just describe the Indians with whom they came into contact, but also hypothesized as to why these peoples were so far behind their European counterparts. Based on their observations, it seemed clear to the lieutenants that the climate was a major causal factor of the indolence and laziness of the people who lived in South America. This was underlined by their belief that the climate had also affected creoles, descendants of the Spanish born in the New World. Their description of how climate affected the intellectual vigor of creoles illuminates how the authors saw climate as determining one’s ability to reason:

...At a young age of Youth they experiment with a particular lucidity of Application, advancing the subtlety, and clarity of their Intellects quickly, which in other Climates would continue only with the force of much work, and a bit more maturity: The fruit of this application endures

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<sup>207</sup> Ibid, 377-378.

<sup>208</sup> Ibid, 366, 546-547.

<sup>209</sup> Ibid, 366. Brading sees this as part of a larger Spanish tactic to justify forced Indian labor in their colonies; see Brading, 428.

<sup>210</sup> Ibid, 541.

prosperously, until the age of 25 or 30 years; and then it decays along the same paths and just as quickly as it accumulated.<sup>211</sup>

At a certain point, even the Spanish give into the effects of the South American climate, which leaves them listless and unable to engage in useful work. Those at the highest levels of society begin to “lack the Incentive of Honor, and easily introduce Leisure” while “they totally lose the ability to be Owners of Reason.” The climate of the Americas “threatens the Light of Reason” more quickly than that of Europeans, who do not seem to suffer a similar degeneration until the age of sixty.<sup>212</sup>

Ulloa and Juan find it fantastic that anyone would question why indigenous peoples were so simple. In anticipated response of readers who might think that Indians should be more capable than they have described them to be, they write:

If one wants to pass judgment on the reports of the first opinion [that Indians might have equal intellects] it is not much to the credit of a living, subtle, and penetrating genius: if one reflects here on their barbarity, their rusticity, the extravagance of their opinions, and their way of life, it will not be very strange, not finding in them the accidents of rationality, and to believe it dignified to place them not very far from Brutes.<sup>213</sup>

Here, Juan and Ulloa are also appealing to the educated reader’s judgment to reveal the difference in the intellectual ability between them and the Indians. To anyone who had observed and recorded as much as they, they imply it should be clear that Indians intellectual capacity is, “quite particular, nor is it flexible in any way, nor capable of leaving a point of natural tranquility, which ridicules Men who are more wise.”<sup>214</sup>

Like La Condamine, Juan and Ulloa cited environmental determinism and the low-level of civilized development in the colonies to explain the degeneracy of indigenous peoples; ideas that would be recycled and reused throughout the racial discourse of the Enlightenment. To them, Indians had degenerated from the supposed decadence of the Incan empire which had been described by Spanish

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<sup>211</sup> Ibid, 47.

<sup>212</sup> Ibid, 47.

<sup>213</sup> Ibid, 543.

<sup>214</sup> Ibid, 544.

chroniclers.<sup>215</sup> Their published works added to this discourse and affected both readers and philosophes alike who recycled the ideas and perceptions laid out in the *Relación abrégee* and the *Relación histórica*. How these accounts fit into the greater Enlightenment discourse about race, as well as how readers received the perceptions of indigenous peoples in the works of La Condamine and Juan and Ulloa will be the project of the rest of this study.

### **Placing La Condamine and Juan and Ulloa within Enlightenment Racial Discourse**

Through examination of the perception of indigenous peoples in the travel accounts of La Condamine and Juan and Ulloa, certain ideas that were also part of the larger Enlightenment racial discourse are reflected in their writings. Both used what they saw as a lack of method and capacity to reason as an excuse to devalue indigenous cultures and label them as less developed or degenerated. The scientific voyages of discovery, like the Peruvian geodesic expedition, applied the empirical language of the new sciences and the methods of reason and analysis in their examination of indigenous peoples. By tracking the publication and use of these travel accounts in the work of other philosophes, it is possible to see how the geodesic expedition helped to further form the racial discourse of which it was itself a partial product. The use of a shared body of perceptions about indigenous Americans in turn led to a common vision of Indians that was also reflected in popular literature and became the common racial discourse among both philosophes and the broader reading public.

Just as the expedition got underway in 1735, Linnaeus published his opus, *The System of Nature*, which employed binomial nomenclature and assumed that there was a fixed order and hierarchy to the world's creatures. Humans were part of this fixed hierarchy, with certain species having more desirable characteristics than others. The book went through twelve editions before Linnaeus' death in 1778, with the last, most complete edition coming out in 1776.<sup>216</sup> His international connections assured the quick

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<sup>215</sup> Ibid, 541.

<sup>216</sup> Tore Frängsmyr, "Carl Linnaeus Biography," *Science Encyclopédie*, <http://science.jrank.org/pages/49227/Carl-Linnaeus.html> (26 April 2010), para. 1 and 2. Koerner, 158-159. As an interesting aside and to jump ahead of the argument a bit, racial

reception of his work in scientific communities across the continent.<sup>217</sup> La Condamine would have been familiar with Linnaeus through his correspondence with the Royal Academy, although it is not certain that Juan and Ulloa read the book before sailing.<sup>218</sup>

Beyond the work of other philosophes, La Condamine definitely would have been familiar with other popular travel accounts of the time, including Lahontan's *Nouveaux voyages* (1703) and Lafitau's *Moeurs des sauvages amériques* (1724), which also presented indigenous peoples as naïve and lacking in the ability to reason.<sup>219</sup> Juan and Ulloa read earlier accounts of the conquistadores and the subsequent travel accounts of authors like Garcilasco de la Vega, as did La Condamine.<sup>220</sup> Juan and Ulloa were also familiar with critics of the view that Indians were naturally deficient such as Feijoo.<sup>221</sup>

The explorers of the geodesic expedition were undoubtedly well-versed in the discourse already common in Europe with regard to the mental capacity of indigenous peoples, but their own published works would do much to steer the course of the conversation about race into the circle of philosophes, which in turn repackaged it for consumption by the broader reading public.<sup>222</sup> Their perceptions of indigenous Americans would be taken as authoritative.<sup>223</sup>

La Condamine especially was used as a source by his contemporaries because of his reputation as a member of the Royal Academy of Sciences. Although not viewed as serious a scholar as some, his contemporaries respected him for his energy and tenacity on behalf of the new sciences. Condorcet, in his *Éloge* of La Condamine, wrote, "of all the savants who have not deserved a place among the ranks of

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discourse was also a part of fictional literature during the Enlightenment and after it. Contemporary examples of travel accounts and racial discourse in fiction will be discussed in the course of this paper, but references to the Enlightenment conceptions of race continued in nineteenth century literature as well, with Ishmael in Melville's 1851 *Moby Dick* discussing Linnaeus' *Systems of Nature* and the scientific method. See John Bryant, "Moby-Dick: reading, rewriting, and editing," in *Leviathan* 9, no. 2 (2007), 12.

<sup>217</sup> Koerner, "Carl Linnaeus in his time and place," 148.

<sup>218</sup> Pratt, 28; Asensio, 210.

<sup>219</sup> Safier, "Unveiling the Amazon," 39.

<sup>220</sup> Brading, 423.

<sup>221</sup> Juan and Ulloa, *Relación histórica*, 47-48.

<sup>222</sup> Reidy et al., 46.

<sup>223</sup> Hulme and Jordanova, 8; Smith, *Explorers of the Amazon*, 180; Tautz 6.

inventors, none has contributed as much as [La Condamine] to the progress of science, nor has rendered such important services of such lasting utility.”<sup>224</sup> One of his first acts after returning to Europe from ten years in South America was to present his findings to a public audience at the Royal Academy. After the public audience, on April 28, 1745, La Condamine continued his remarks before a small group of Academy members. He would continue to present his findings at nine sessions to such scholars as D’Alembert, who in five years was to publish the first edition of his Encyclopedia.<sup>225</sup> Such attention to his findings marked a major contribution to the racial discourse of the age. As Safier summarizes:

La Condamine’s scathing assessments of indigenous peoples in South America as lazy, unintelligent, gluttonous, and incapable of rational thought formed part of a common vocabulary by which many European authors came to discuss Amerindians in the wake of his journey, especially as a view that laid out multiple stages of human development came to predominate among European naturalists and philosophers from Montesquieu to Hume.<sup>226</sup>

One of the most important people that La Condamine’s findings would influence was already listening at his presentation, Georges Louis-LeClerc, the Comte de Buffon.

Buffon published his *Histoire naturelle* in 1747, only two years after the publication of La Condamine’s *Relación abrégee*. In it he repeated many of the findings that La Condamine had reported in his travel accounts. In addition, Buffon was the recipient of all the natural history samples that Godin and La Condamine were able to ship back from their travels, which were catalogued and examined by Buffon and his assistants at the Jardin du Roi.<sup>227</sup> Buffon believed that different climates resulted in differentiated speciation, which La Condamine had remarked upon when blaming the indolence of Indians on their living in the *Torrid Zones*.<sup>228</sup> He echoed La Condamine’s conviction that indigenous

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<sup>224</sup> Marie Jean Antoine Nicolas Caritat de Condorcet, *Éloge des Académiciens de l’Académie royale des sciences, morts depuis l’an 1666 jusqu’en 1790* (Paris: 1799), vol. I, 233. As quoted in Safier, “Unveiling the Amazon,” 37.

<sup>225</sup> Safier, “Unveiling the Amazon,” 33. Safier writes in his book, *Measuring the New World*, “This portrait of La Condamine as an objective reporter of firsthand data, a specimen collector, and an unbiased scientific observer was the image he wished to promote to the Academy” (91). Safier identifies many of the sources that La Condamine used in this account that he did not acknowledge to boost his own credibility. See Safier, *Measuring the New World*, chapter 2.

<sup>226</sup> Safier, *Measuring the New World*, 70.

<sup>227</sup> Safier, *Measuring the New World*, 209.

<sup>228</sup> La Condamine, *Relation abrégee*, 25. See Buffon, “Second Discourse,” in Lyon and Sloane, 138.

peoples lacked the requisite level of civility to be considered intelligent and discounted the ability of indigenous peoples to learn as Europeans do, since they were a separate, and less developed, race.<sup>229</sup> At times, Buffon practically quotes directly from La Condamine's account, as when he describes the Indians of the Amazon as "tawny, being a mixture of red and brown", whereas La Condamine wrote that the Indians were, "tawny, of a colour somewhat reddish."<sup>230</sup>

While La Condamine was presenting his findings to a receptive audience, Juan and Ulloa were writing and publishing their own account. Printed at the expense of the Crown, copies of the *Relación histórica* were shipped to all the major courts of Europe immediately after the book came off the presses in 1748.<sup>231</sup> In order to make the desired impact, the Crown insisted on the "best there was in Madrid" with regard to paper and materials.<sup>232</sup> Safier goes so far as to describe its production in the following way, "its attractive material appearance would function as window dressing to showcase Spain's enlightened management of its overseas territories."<sup>233</sup> The original printing included 900 volumes and was "circulated in England, Portugal, France and Naples, as well as in Spain."<sup>234</sup> Copies were also sent to distinguished persons including La Condamine himself, the Duke of Parma, Bouguer, Maupertuis, and academies like the Royal Society in London, the Academy in Paris, the Berlin Academy, the Academy at Bologna, the Academy of Petersburg, the Leipzig Society and the Academy at Cadíz.<sup>235</sup> Such a diverse distribution assured that the multi-volume *Relación histórica* was spread across the Enlightenment centers of learning.

Another important contributor to the racial discourse of the Enlightenment used both the *Relación histórica* and the *Relación abregée* in his work, in order to both discount previous views of indigenous peoples and to support his own theory. Cornelius de Pauw published the *Recherches*

<sup>229</sup> Buffon, *Histoire naturelle*, as quoted in Eze, 19.

<sup>230</sup> Buffon in Eze, 20; La Condamine, *Relation abrégée*, 25.

<sup>231</sup> Escudero, 2.

<sup>232</sup> Navarro and San Vicente, LV, translation made by author. The final cost was 203, 561 reales for the initial printing (LXV).

<sup>233</sup> Safier, *Measuring the New World*, 172.

<sup>234</sup> Leonard, 12.

<sup>235</sup> Navarro and San Vicente, LXIII; Escudero, 2.

*philosophiques sur les Américains* in 1768, years after the original travel accounts had been circulated and after the most updated volume of Buffon's *Histoire naturelle* was released in 1766. Devaluing earlier Spanish sources as Juan and Ulloa had done, de Pauw presented his view of indigenous Americans as climatically degenerated and discounted the purported existence of ancient advanced civilizations.<sup>236</sup> For this reason he used the more contemporary accounts of Juan and Ulloa for his information about the habits and lifestyle of indigenous Americans, never having traveled to the South America himself.<sup>237</sup> In addition, he leaned heavily on Buffon's environmental determinism in his analysis.<sup>238</sup> De Pauw also preferred La Condamine specifically because he was an empirically trained academician who based his account on first-hand observations and came to the conclusion that the Indians were "insensible and naturally stupid."<sup>239</sup> In doing so, he was part of a greater movement of academicians and readers who as a body rejected older forms of authority for newer, more observationally based sources. As Esguerra explains, "The educated audience of the eighteenth century preferred the new accounts of philosophical travelers and began to doubt the value of the first Spanish reports."<sup>240</sup>

The Abbé de Raynal, who published the first edition of his *Histoire philosophique des deux Indes* in 1770, was not so scathing about the validity of older Spanish sources and even marveled at the wonders of the ancient Mexican and Incan civilizations. However, he also repeated the ideas of Buffon that climate affected the Indians' abilities and mentioned that Indians had the minds of infants and were degenerated from their former glory.<sup>241</sup> In his second edition of 1774, however, the influence of De Pauw, and by extension that of La Condamine and Ulloa, was more pronounced. Raynal instead

<sup>236</sup>Esguerra, 60; Juan and Ulloa, *Relación histórica*, 541.

<sup>237</sup> Brading, 432.

<sup>238</sup> Pagden, *Rhetoric of Empire*, 165.

<sup>239</sup> Esguerra, 62, translation made by author. De Pauw did take La Condamine to task for believing the Amazon warrior women could exist for De Pauw suspected that the women were mere tribal leaders, not all-female bands. Esguerra thinks that La Condamine only included the tales of El Dorado and the Amazons in his *Relation abrégée* to "save his reputation and to please the large Parisian public." See Esguerra, 61.

<sup>240</sup> *Ibid*, 46, translation made by author.

<sup>241</sup> Pagden, *Rhetoric of Empire*, 3. Brading, 441. This actually shows confusion between the ideas of environmental determinism as presented by Buffon and degeneration as a result of climate which De Pauw preferred. However, both refer to the power of climate on the ability of the Indians to reason and perform daily tasks, which are discussed in the *Relation abrégée*, 25 and in the *Relación histórica*, 542.

postulated that the ancient civilizations, and their archeological remnants, were nothing but imaginary fantasies; this argument correlated with the opinions of La Condamine and Ulloa with regard to the Incan and Mexican empires.<sup>242</sup> He wrote, “We cannot with any confidence give credit to the tales published by the conquerors of Peru concerning the grandeur and magnificence of the monuments of all kinds that they found there.”<sup>243</sup> This echoes La Condamine’s condemnation of the earlier Spanish sources as “ignorant;” indeed, his entire literary project in writing the *Relación abrégee* was to correct the false interpretations of previous explorers of the Amazon region.<sup>244</sup>

William Robertson set out to synthesize all the previous narratives about American Indians when he wrote his *History of America* in 1777. He relied on the environmental determinism of Buffon, but agreed with De Pauw that the early stage of development explained the lower mental capacity of the indigenous peoples of America.<sup>245</sup> In fact, Robertson thought that we could learn of our human past by empirically observing indigenous Americans, much as Ulloa had done. Part of the perception of Indians as degraded came from his concurrence with Ulloa that creoles degenerated after a few years on American soil. He also agreed that Indians were natural drunkards who were only “animated by intoxicating liquors.”<sup>246</sup> Creoles and Indians reverted to earlier levels of subsistence and trended toward the same root indolence and stupidity.<sup>247</sup> Ulloa is frequently cited by Robertson and he calls Ulloa’s account a “remarkable proof.”<sup>248</sup> La Condamine too is touted as a great source on account of his scientific methods, which gave more value to his works than those written by creoles. Robertson described him as, “one of the latest and most accurate observers of the interior state of South

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<sup>242</sup> Esguerra, 74-75.

<sup>243</sup> Raynal, Extract III, chapter 6, 100. Brading and Esguerra attribute the addition of this entire section of the 1774 edition to a late reading of La Condamine’s account.

<sup>244</sup> La Condamine, *Relation abrégee*, 5.

<sup>245</sup> Robertson, *Works*, Vol. VI, 305. For ties to Buffon see Brading, 435; Pagden, 165.

<sup>246</sup> *Ibid*, Vol. VI, 408.

<sup>247</sup> *Ibid*, Vol. VI, 379; Juan and Ulloa, *Relación histórica*, 47; Brading 436.

<sup>248</sup> Robertson, *Works* (1777), notes, 484.

America.”<sup>249</sup> As Esguerra echoes, La Condamine was the “most respected philosophical traveler in the eighteenth century who visited the Andes.”<sup>250</sup>

While the influence of La Condamine and Juan and Ulloa’s accounts on later philosophes is evident, it should be noted that their ideas were not revelations. Indeed they were aligned with the contemporary conversation that was happening around race and how race affected reasoning ability.<sup>251</sup> Ulloa and La Condamine would continue to publish their ideas about indigenous Americans for the thirty years following the expedition and remained active in the Republic of Letters, which also kept their ideas in the minds of those with whom they corresponded.<sup>252</sup> However, the philosophes and academicians of the Republic of Letters were not the only people to read La Condamine and Juan and Ulloa. There was a broader reading public that was also exposed to the travel accounts.

### **La Condamine and Juan and Ulloa in the public reading sphere**

Perhaps no better example exists of the degree to which the Peruvian geodesic expedition’s ideas were assimilated into the Enlightenment racial discourse than the fact that it was La Condamine who was asked to write the sections on Guyana and El Dorado in Diderot and D’Alembert’s *Encyclopédie*, for he was thought to be the foremost expert on these topics.<sup>253</sup> Also, in the article on the Amazon, La Condamine’s voyage is summarized and even promoted. The 1751 edition of the *Encyclopédie* states that La Condamine “has published an extremely interesting and very well-written account of his voyage, which has been inserted in the Royal Academy of Science’s 1745 volume. We

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<sup>249</sup> Ibid, Vol. VI, 453.

<sup>250</sup> Esguerra, 46.

<sup>251</sup> There were also critics of La Condamine and Juan and Ulloa. However, those of Juan and Ulloa were written anonymously and never published. See Safier, *Measuring the New World*, chapter 5. Most of the critics of La Condamine were individual readers who responded in letter form and who will be discussed in the following section.

<sup>252</sup> La Condamine later published *Histoire des pyramides de Quito, élevées par les académiciens envoyés sous l’équateur par ordre du roi par M. de la Condamine* (1751), *Journal du voyage fait par ordre du roi, à l’équateur: servant d’introduction historique à la Mesure des trois premiers degrés du méridien* (Paris: Imprimerie Royale, 1751), numerous letters on the subject, as well as other travel accounts to Italy and numerous books on inoculation. Ulloa later published articles on various scientific and military subjects and reiterated many of his negative views of indigenous peoples in his *Noticias americanas* (Madrid: Press of Don Francisco Manuel de Mena, 1772).

<sup>253</sup> Safier, “Unveiling the Amazon,” 41. For an overview of the readership of the *Encyclopédie*, see Outram, 46-52.

send our Readers there, and strongly exhort you to read it.”<sup>254</sup> There could hardly be a less ringing endorsement for the *Relación abregée* and the reading public of Europe did indeed have ample opportunity to read the accounts of the Peruvian geodesic expedition.

As previously mentioned, the *Relación abregée* first appeared in French in 1745; La Condamine accompanied the publication with a public presentation of his work at the Royal Academy on April 28, 1745.<sup>255</sup> The work had already been produced in a small Spanish printing in Amsterdam under the title of *Diario del viaje al Ecuador* at the beginning of the same year. An English version followed in 1747, as well as a second French edition printed in Maestericht in 1778. There were also German and Swedish translations by 1762.<sup>256</sup> It was reproduced in abridged form in compilations of travel accounts that were popular at the time, such *Voyages and Travels in all Parts of the World*, which was illustrated so as to provide the public with more detail of the adventures it related.<sup>257</sup>

Juan and Ulloa’s account was first printed in 1748 and distributed specifically to courts and academies at Royal expense. 668 volumes or copies were distributed to booksellers within Spain and 100 copies were sent to the Spanish Embassy in Paris.<sup>258</sup> Translations abounded of the *Relación histórica*, with a German version in 1751, French in 1752, English in 1758, and Dutch in 1771.<sup>259</sup> The English version was especially popular; the translation by John Adams was in its third edition by 1772 and its fifth by 1807.<sup>260</sup> It was also reprinted in the United States, with a Philadelphia printing company publishing their own translation in 1801.<sup>261</sup>

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<sup>254</sup> As quoted in Safier, “Unveiling the Amazon,” 41.

<sup>255</sup> Ibid, 33.

<sup>256</sup> The 1747 English version is the edition used for this study. The other translation appeared as *Relation abrégée d’un voyage fait dans l’intérieur de l’Amérique méridionale* (Maestericht: Jean-Edme Dufour and Philippe Rour, 1778) and *Berättelse om en resa igenom det innersta of Södre America*, in Rivers, comp. and tr., *Bihang til Aminsalem Lord Anson resa* (Stockholm: 1762).

<sup>257</sup> John Pinkerton, *Voyages and Travels in all Parts of the World* (London: Longman et al., 1813).

<sup>258</sup> Navarro and San Vicente, LXI.

<sup>259</sup> Escudero, 1.

<sup>260</sup> Leonard, 12.

<sup>261</sup> Jorge Juan and Antonio de Ulloa, *Voyage of Don George Juan and Don Antonio de Ulloa to South America* (Philadelphia: Joseph & James Crukshank, 1801).

While both works were widely distributed, they were also discussed by critics and reviewers alike. Due to the delicate nature of the Spanish publishing scene, where one's reputation and possibly much more was at risk if one admitted to writing something contrary to official views, an anonymous critic wrote, but never released, a critique of Juan and Ulloa's account of the indigenous Americans.<sup>262</sup> This critique took Juan and Ulloa to task for their largely negative depictions of indigenous peoples and also objected to the "black impressions" the *Relación histórica* might leave on "the souls of its Readers."<sup>263</sup>

La Condamine, in the somewhat less rigid French publishing market, was also criticized. Critics in Amsterdam, like Isaac de Pinto, in Portugal like Xavier Ribeiro de Sampaio, and even his old creole friend Maldonado, wrote critiques which were discussed by reading elites across Europe.<sup>264</sup> La Condamine penned several letters in response to rumors about his expedition's actions, such as his 1746 *Lettre a Madame --- sur l'émeute populaire excite en la ville de Cuenca au Pérou, le 29 d'août 1739 contre les académiciens des sciences, envoyés pour la mesure de la terre*, in which he justified his lawsuit against the officials of Cuenca in the aftermath of the murder of Seniérgues at a bullfight.<sup>265</sup> Bouguer and La Condamine also wrote dueling accounts and letters throughout the early 1750s, with the most acerbic being Bouguer's 1752 *Justification des Mémoires de l'Académie royale des sciences de 1744, et du livre de la Figure de la terre determine par les observations faites au Pérou par M. Bouguer*.<sup>266</sup> The two continued their battle in words with retaliatory letters published and distributed in French salons in 1754 in which the tone was far from civil. Asensio describes Bouguer's *Justification* as, "a torrent of

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<sup>262</sup> The knowledgeable critique presented in the letter, and the author's familiarity with South America, leads Safier to surmise that the author might have been an official within the colonial administration or perhaps a Jesuit missionary. See Safier, *Measuring the New World*, 179-184.

<sup>263</sup> As quoted in Safier, *Measuring the New World*, 181.

<sup>264</sup> *Ibid*, 121-122.

<sup>265</sup> Charles-Marie de La Condamine, *Lettre a Madame --- sur l'émeute populaire excite en la ville de Cuenca au Pérou, le 29 d'août 1739 contre les académiciens des sciences, envoyés pour la mesure de la terre* (Paris: 1746).

<sup>266</sup> Pierre Bouguer, *Justification des Mémoires de l'Académie royale des sciences de 1744, et du livre de la Figure de la terre determine par les observations faites au Pérou par M. Bouguer* (C. Jombert in Paris, 1752); Pratt, 17.

anger and disgust at the attitude of La Condamine after his return to Paris.<sup>267</sup> Even though the critiques were not in total agreement with La Condamine's assessment of America, they did keep the published works of La Condamine in the public eye and coming off the presses, widening the circle of people that were exposed to his ideas and descriptions of South America.

The majority of the publicity about La Condamine's *Relación abrégee* was actually quite positive. Despite his critics, the reception of his work was highly praised. Book reviews were published in popular periodicals toward the end of 1745 that summarized La Condamine's account and at times quoted lengthy sections from the text itself. This was important for the reader reception of La Condamine's perceptions of indigenous Americans, because "Through these articles, therefore, the *Relation* became known to a much broader audience than the small group of scientific elites gathered in the King's Library."<sup>268</sup> The anonymous reviewer in the *Mercure de France*, which published an anticipatory article about the publishing of La Condamine's findings, wrote, "The public will benefit, in time, from the numerous discoveries that M. de la Condamine has produced during this long and difficult journey, and we will see that the new world, which is today the source of all the gold in Europe, is no less wealthy in literary treasures."<sup>269</sup> The account by La Condamine was considered as a resource for the public from which common and educated readers alike could draw conclusions about the South America. This was La Condamine's goal which he stated in his prologue, as did Juan and Ulloa when they hoped to present to the public "all that this Voyage could advance."<sup>270</sup>

Thus, from the distribution of the works and the critiques and reviews published about the travel accounts of La Condamine and Juan and Ulloa, we may conclude that the books were widely read.

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<sup>267</sup> Asensio, 236, translation by author. Bouguer took particular exception to La Condamine's rehashing of the scandal involved with the building of the memorial pyramids. Bouguer thought that pyramids were an embarrassing episode better left in the past, although he was also perturbed at the level of credit that La Condamine claimed for the scientific experiments the expedition conducted as a group.

<sup>268</sup> Safier, "Unveiling the Amazon," 40.

<sup>269</sup> *Mercure de France*, August 1745, 101, as quoted in Safier, "Unveiling the Amazon," 40.

<sup>270</sup> Juan and Ulloa, *Relación histórica*, Prologue, no pagination in Prologue. La Condamine hoped to "excite" the public's interest in his voyage; *A succinct abridgement*, viii.

The exact number and social station of all the accounts' readers is, of course, impossible to ascertain. However, it is possible to understand the popularity of the genre of travel literature and to see how La Condamine's and Juan and Ulloa's perceptions about indigenous peoples might have fit within the wider body of ideas within the genre.

The Enlightenment is often described as a reading revolution. While the use of the word revolution has been widely disputed, the fact remains that more and more people were reading in the eighteenth century than previously and there was more published material for consumption by these new readers.<sup>271</sup> Part of the change in the reading public, defined as "aggregates of readers" by James Van Horn Melton, refers to Rolf Engelsing's thesis of a shift from intensive reading of a few books to extensive reading of many books.<sup>272</sup> However, as Van Horn Melton and Outram, among others, point out, this thesis is a simplified overview of a much more complex literacy landscape in Enlightenment Europe.<sup>273</sup> Based on signature rates, adult male literacy in Scotland rose from 25 percent in 1643 to 65 percent in the mid-1750s. English males went from 30 percent to 60 percent for the same time period; French men were at 29 percent in 1686-1690 and rose to 48 percent by 1786-1790. English women were at 35-40 percent at mid-eighteenth century and French women were signing parish marriage registers at 14 percent in 1686-1690 and at 27 percent in 1786-1790.<sup>274</sup> While these numbers suggest that not even a majority of people could read, there was a significant rise in available readers. Correspondingly, the number of books published increased dramatically over the course of the long eighteenth century. For

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<sup>271</sup> Wittman rejects the idea of a reading revolution but does admit that many more people were reading and discussing texts, which he sees as an exercise of their increasing sense of individuality. Reinhard Wittman, "Was there a Reading Revolution at the End of the Eighteenth Century?" in *A History of Reading in the West*, ed. Guglielmo Cavallo and Roger Chartier (Amherst, Mass.: University of Massachusetts Press, 1999), 286. See also, Cavallo and Chartier, "Introduction," in *A History of Reading in the West*, ed. Guglielmo Cavallo and Roger Chartier (Amherst, Mass.: University of Massachusetts Press, 1999), 38. Adrian Johns also objects to the term revolution for its emphasis on the act of reading instead of the actions inspired by the knowledge gained from reading. Johns, 56-57. See also Roger Chartier, *Cultural Origins of the French Revolution* (Durham, N.C.: Duke University Press, 1991), 85-87.

<sup>272</sup> James Van Horn Melton, *The Rise of the Public in Enlightenment Europe* (Cambridge: Cambridge University Press, 2001), 89.

<sup>273</sup> *Ibid.*, 90; Outram, 79. For a good overview of literacy rates in different European nations, as well as the polemics of rural readers, Protestant vs. Catholic areas, and gender discrepancies in literacy, see Van Horn Melton, chapter 3. See also R. A. Houston, *Literacy in Early Modern Europe: Culture and Education 1500-1800* (London and New York: Longman, 1989).

<sup>274</sup> Van Horn Melton, 82.

example, the Frankfurt and Leipzig book fairs doubled the size of their offerings over the course of the century. In 1746 the book fair catalogue contained 5,000 new titles; by 1800 it had 12,000.<sup>275</sup>

If more and more people were reading and more books were being published, how did travel accounts fit into the repertoire of books that were being consumed? There were roughly 2,000 travel logs printed in the eighteenth century, chronicling voyages all over the world.<sup>276</sup> As Fleming describes, "Travel books had always been popular...but in the 18<sup>th</sup> and 19<sup>th</sup> centuries they became required reading. This was the high noon of exploration literature, writers, artists, and armchair explorers feeding off the accounts that were published almost yearly."<sup>277</sup> For example, the account of Captain Cook's second voyage, *A Voyage to the Cape of Good Hope*, enjoyed a printing of 40,000 copies in 1769, a further 16,000 in 1799, and 6,000 more as late as 1850.<sup>278</sup> Johan Reusch, in his examination of the rise of the concept of the noble savage in German literature, noted an "...80 percent increase in literary references to the Americas over the previous [eighteenth] century."<sup>279</sup> Anders Sparrman, in the English translation to his account of Captain Cook's second voyage, described the reception of travel literature when he wrote:

Relations of voyages and travels have at all times, and in all ages, since the invention of letters, been favourably received by the public; but, perhaps, in no age so well as in the present; writings of this kind being bought up with avidity and read with eagerness, more especially in this island [England], not only by the learned and polite, but also by the rude and illiterate.<sup>280</sup>

Both the general public and the educated elite enjoyed travel accounts for what they could learn of far-off worlds.

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<sup>275</sup> Outram, 69.

<sup>276</sup> Edwards, 3.

<sup>277</sup> Fleming, 123.

<sup>278</sup> *Ibid*, 119.

<sup>279</sup> Johan Reusch, "Germans as Noble Savages and Castaways: Alter Egos and Alterity in German Collective Consciousness during the Long Eighteenth Century," *Eighteenth-Century Studies* 42, no. 1 (2008): 117.

<sup>280</sup> Anders Sparrman, *A Voyage to the Cape of Good Hope, towards the Antarctic Polar Circle, and Round the World* (London, G. J. and J. Robinson, 1785), vol. I, iii.

Part of the interest in distant voyages and the accounts of authors such as La Condamine and Juan and Ulloa was due to an increased reader appreciation for scientific material. Travel accounts were increasingly empirical in the presentation of their findings, encouraging readers to participate in the language of the new sciences that were popular within the academies, coffee houses, and salons.<sup>281</sup> The popularity of the travel accounts written by men of science was part of a trend aimed at the “popularizing of new scientific ideas and removing of scientific discourse from the strict purview of the academy,” which would only “gain momentum” as the Enlightenment continued.<sup>282</sup> The public was better informed than ever before about experimental science and method, which was reflected in their reading materials like scientific travel journals.<sup>283</sup> Many writers therefore wrote specifically with this expectant public in mind, including La Condamine and Ulloa and Juan. They were writing for a similar audience as Erasmus Darwin, who dedicated his 1789 *The Botanic Garden, Part II: Containing the Loves of the Plants* to, “ladies and other unemploy’d scholars.”<sup>284</sup>

As Darwin’s dedication implies, a large part of the increasing readership interested in science were women, who were largely left out of the academies of science and therefore sought knowledge of the new sciences elsewhere. Publishers recognized this market and books of science focused exclusively on women were printed throughout the Enlightenment--perhaps the most famous of which is *Il Newtonianismo per le Dame* by Francesco Algarotti. In the sixth edition, the following lyric described Algarotti’s project, “Algarotti charms the Curious Fair/With Truths that seldom reach the female ear.”<sup>285</sup> There was also a certain degree of idolatry among the female readership of the men of the voyages of discovery, who were seen as heroic and brave in blazing a trail of new knowledge. As Mary Terrall has pointed out, “Women figured prominently among the admirers of the men, their books, and their

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<sup>281</sup> Outram, 60-62.

<sup>282</sup> Safier, “Unveiling the Amazon,” 42.

<sup>283</sup> Asensio, 202, 210; Koerner, “Carl Linnaeus in his time and place,” 155.

<sup>284</sup> Erasmus Darwin, *The Botanic Garden Part II: Containing the Loves of the Plants* (London: J. Johnson, 1789), dedication.

<sup>285</sup> “Del Signor Symmer” in Francesco Algarotti, *Il Newtonianismo per le Dame*, 6th ed. (Naples: Eredi Hertz, 1746), preface, no pagination in preface.

science.”<sup>286</sup> Women could be avid consumers of science, but as Londa Schiebinger has noted, women were participating but “not shaping the future course of science.”<sup>287</sup>

Whether female or male, a broader readership was open to books that gave information about new worlds in an empirical way, and La Condamine and Juan and Ulloa helped to fill that demand. Authors writing in similar genres were often competing for readers and had to prove their accountability and credibility to their readership. For Ulloa and Juan, a large part of this credibility was provided by the title page, which declared the authors’ scientific memberships from across Europe.<sup>288</sup> Similarly, the 1772 English translation of Juan and Ulloa’s account assured its readers that the authors were, “men of the most respectable characters, men distinguished for their parts and learning” for “it was of great consequence, to know the characters of the authors we peruse.”<sup>289</sup> Such a display of credentials was important for the publishing industry of the Enlightenment was rife with imposters and counterfeiters. Getting the real story from a legitimate man of the new sciences was never assured because natural philosophers were, “seen as struggling for credibility in a cultural bazaar filled with more different candidates for natural knowledge than had existed before, offering greater potential rewards.”<sup>290</sup> With so many competitors, natural philosophers had to differentiate themselves from the fray, which is precisely what La Condamine endeavored to do in his preface. As already noted, he writes, “The question of the earth’s figure being decided, and the curiosity of the public abated upon that head, I thought to excite it somewhat more...by a succinct account of my voyage.”<sup>291</sup> If successful, natural philosophers could become the heroes of the travel narratives of the time as well as gain prestige among philosophes.<sup>292</sup>

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<sup>286</sup> Terrall, “Heroic narratives of quest and discovery,” 237.

<sup>287</sup> Londa Schiebinger, “Gender and natural history,” 164.

<sup>288</sup> Juan and Ulloa, *Relación histórica*, cover page.

<sup>289</sup> Juan and Ulloa, *A voyage to South America. Describing, at large, the Spanish cities, towns, provinces, &c. on that extensive continent. Undertaken by command of the king of Spain* (London: L. Davis, 1772), iv-v.

<sup>290</sup> Johns, 43. See also Pratt.

<sup>291</sup> La Condamine, *A succinct abridgement*, viii.

<sup>292</sup> Terrall, “Heroic narratives,” 238-240; Asensio, 210-211.

Authors also had to prove their credentials by appealing to the high regard that Enlightenment readers had for empirical accuracy because travel accounts, while quite popular, were also commonly assumed to be at least partially fictional. Condorcet described the problem with travelers when he wrote, ““travelers are almost always imprecise observers; they examine objects all too quickly, with all the prejudice of their own country.”<sup>293</sup> Cornelius de Pauw, who was quite strict in the sources that he deemed worthy, wrote, “as a general rule...out of a hundred travelers, there are sixty who lie for no reason but their own stupidity, thirty who lie for some gain, or if you will, out of malice, and lastly ten who tell the truth, and act as men.”<sup>294</sup> La Condamine, Juan, and Ulloa would have wanted to be included as part of that elite ten men.

Part of the suspicion surrounding the veracity of travel literature was based on the popularity of fictional travel accounts that had already been published. *Robinson Crusoe* was published in 1719 and Montesquieu’s *Persian Letters* were believed to be true by many who first read them in 1721.<sup>295</sup> Similarly, Daniel Defoe’s *A New Voyage Round the World By a Course Never Sailed Before* of 1725 was also thought real.<sup>296</sup> The fictional, and highly satirical, *Gulliver’s Travels* was published in 1726 describing fantastic peoples that were actually representations of individuals and groups within English society.<sup>297</sup> As Espey points out, “The popularity of fictional travel narratives fed the appetite for nonfiction narratives, and vice versa, so that novels and travel books formed more a ‘continuum’ than separate genres.”<sup>298</sup> However, if scientific credentials could be authenticated as La Condamine and Juan and

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<sup>293</sup> As quoted in Safier, *Measuring the New World*, 10.

<sup>294</sup> *Ibid*, 10.

<sup>295</sup> Wolff and Cipollini, 1.

<sup>296</sup> Gillian Beer, “Travelling the other way” in *Cultures of natural history*, eds. N. Jardine, J. A. Secord, and E. C. Spary (Cambridge: Cambridge University Press, 1996), 323.

<sup>297</sup> Michael Seidel, introduction to *Gulliver’s Travels*, by Jonathon Swift (New York: Barnes & Noble Books, 2003), xxi-xxiv. Interestingly, Gulliver mentions the controversy over the shape of the earth during his time with the Luggnagians. When speaking about some immortal locals he delights that such long-living people would be able to, “see the discovery of the longitude, the perpetual motion, the universal medicine, and many other great inventions brought to the utmost perfection.” Swift, 223.

<sup>298</sup> David Espey, “Studies in Eighteenth-Century Travel Literature and Beyond: Genre, Science, and the Book Trade,” *The Age of Johnson* (2004): 371.

Ulloa's were, then the popularity of the travel genre could be combined with increased interest in natural philosophy to tap into a larger audience.

With their increased credibility, the travel accounts of La Condamine and Ulloa were taken as authoritative by their philosophe reading audience and, we can assume, by the wider readership as well. The fact that the discerning De Pauw, so suspicious of travelers in general, used both accounts as sources in his own works on race shows how imbedded in the racial discourse of the Enlightenment the Peruvian geodesic expedition was. The measurements and natural history specimens that made the reputation of the travelers also made their opinions on indigenous Americans seem authoritative. As Gregory and Duncan explain when writing of travel writing in general, "...travel and its cultural practices have been located within larger formations in which the inscriptions of power and privilege are made clearly visible."<sup>299</sup> Due to the power conferred on them as authoritative sources of knowledge, their perceptions of indigenous Americans entered the racial discourse of the time at both the popular and elite level and continued to be used by later authors such as Raynal, Robertson, De Pauw and Buffon. Certain travel accounts, like those of La Condamine and Juan and Ulloa, became major sources of information about indigenous Americans, even though indigenous peoples were not a major focus of their studies.

## Conclusions

Texts are cultural artifacts, not accurate descriptions of the time and place in which they were written. When authors write for a certain audience, they alter the information offered to match expectations. This may be especially so for travel writers, who had to describe a largely alien world to a relatively less tutored, but curious, readership.<sup>300</sup> The "vagueness about the aims and purposes of an official publication, and in particular about the balance between the entertainment and edification of the general reader on the one hand, and the provision of scientific and technical information on the

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<sup>299</sup>James Duncan and Derek Gregory, eds. *Writes of Passage* (London: Routledge, 1999), 2.

<sup>300</sup> Chartier and Cavallo, 35.

other” caused a certain degree of negotiation by authors that tends to cause them to describe unknown things in familiar ways.<sup>301</sup> For this reason, indigenous Americans were described in these two travel accounts by the standards of reason and reasoning ability as Europeans understood them.<sup>302</sup> In a comparative schema Indians would always come up lacking, and that may be what readers were in fact expecting. Espey explains, “The validity and value of information artifacts, and specimens brought back by the traveler from periphery to center depend on the state of knowledge at the center.”<sup>303</sup> Lisa Zunshine expands on this idea when she writes on the truth of book cultures in the Enlightenment, “...our culture appears to be a multifaceted feedback mechanism engaged in the process of satisfying, reinforcing, struggling with, and manipulating our cognitive predispositions.”<sup>304</sup> Thus, perceptions of indigenous cultures were influenced by author interpretation, but also by audience expectation. The Indian described in travel accounts like the two examined here was the Indian that lasted in the ideology of the Enlightenment and was repeated in the racial discourse of the period.

La Condamine and Juan and Ulloa were writing at a unique time when travel accounts were especially popular, but also when the empirical methods of the new sciences were in vogue with a broader readership. The result was a travel narrative that combined scientific measurements and instrument readings alongside biased descriptions of indigenous Americans. However, because “Material data gathered from the scientific reports of “enlightened” travelers consequently took precedence over literary sources” at this time, the accounts were read as authorities not just on the subjects of astronomy and geography, but also on the Indians described in their pages.<sup>305</sup> Travel accounts are inherently “unstable,” to use Birgit Tautz’s word, and contain many subjective elements

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<sup>301</sup> Edwards, 7.

<sup>302</sup> Smith, 180; Lenman, 206; Fowkes Tobin, 12; Safier, *Measuring the New World*, 12.

<sup>303</sup> Espey, 370.

<sup>304</sup> Zunshine, 216.

<sup>305</sup> María Soledad Barbón, “Book review: *How to Write the History of the New World: Histories, Epistemologies, and Identities in the Eighteenth-Century Atlantic World*. By Jorge Cañizares-Esguerra,” *MLQ: Modern Language Quarterly* 65, no.2 (2004): 317.

throughout their pages.<sup>306</sup> The subjective qualities of the two travel accounts in question were reinforced by the authority given their authors, which legitimated harsh perceptions of indigenous Americans as lacking in reason. Travel accounts like La Condamine's and Juan and Ulloa's added to a stream of interest in scientific inquiry and travel that were already growing in strength. The process of recycling their views in later works like those of Buffon, De Pauw, Raynal, and Robertson made their accounts of indigenous peoples into persistent stereotypes.

Although it is impossible to say with complete certainty that all readers understood indigenous peoples precisely as they were described by La Condamine and Juan and Ulloa, travel accounts are a useful tool for the historian who wishes to examine how the ideological elements of a certain subjects, like indigenous Americans, might have been constructed. As Peter Burke explains:

If we can only learn how to use them, travelogues will be among the most eloquent sources for cultural history...The point is to emphasize is the rhetorical aspect of their descriptions, notably the importance of commonplaces and schemata. The texts are no more completely spontaneous and objective descriptions of new experiences than autobiographies are completely spontaneous and objective records of an individual life. Some of these descriptions at least were written with publication in mind, and all follow certain literary conventions. Others simply reflect prejudices, in the literal sense of opinions formed before the travelers left their own country, whether these opinions were the result of conversation or reading.<sup>307</sup>

The approach taken in this study "recognizes that texts, printed or not, cannot compel readers to react in specific ways, but that they must be interpreted in cultural spaces the character of which helps to decide what counts as a proper reading."<sup>308</sup> The rise of a more widespread book culture created a broader intellectual space and historians should explore the ways that readers and writers in that space influenced each other to construct the subjects that were of increasing importance in the eighteenth century, such as indigenous Americans. By identifying what a certain culture values, in this case the Enlightenment concept of reason, and how that culture used its values to judge other peoples, it is

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<sup>306</sup> Tautz, 103; Vivies, 7; Todorov, 293; Chloe Chard and Helen Langdon, eds., *Transports: Travel, Pleasure, and Imaginative Geography, 1600-1830* (London: Yale University Press, 1996), 14.

<sup>307</sup> Burke, 94.

<sup>308</sup> Johns, 20.

possible to see how persistent stereotypes begin much deeper in the public consciousness than is commonly assumed. The reflexive relationship between author and reader betrays a “much more complex taxonomy of cultural difference and natural history,”<sup>309</sup> which is the historian’s task to uncover and examine.

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<sup>309</sup> Duncan and Gregory, 5.

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