Adam Smith and the Creative Role of Imagination

Keith Hankins & Brennan McDavid
Chapman University

Scholars interested in Adam Smith's account of imagination have traditionally distinguished between two aspects of our capacity for imagination, or, alternatively, between two domains in which it operates: that of "sympathetic" or "practical" imagination, on one hand, and "nonsympathetic" or "theoretical" imagination on the other.[1] The former is exercised in the moral and social domains of life, where we "chang[e] places in fancy" with fellow human beings and, thereby, acquire moral understanding of them and deepen our understanding of ourselves.[2] Theoretical imagination, in contrast, is exercised in relation to objects and natural phenomena and, so, involves no imaginary changing of places. Instead, it involves a search for harmony and orderliness among observed phenomena and involves positing—that is, imagining—relationships between seemingly disparate events and objects.

These two modes of imagination are brought together again by the common limit on their exercise. As the traditional reading instructs us, Smith follows Hume's epistemology in setting the limit of imagination.[3] In Hume's words, the limit is established by our inability to "step beyond ourselves" or to "conceive any kind of existence, but those perceptions, which have appeared in that narrow compass."[4] Or, to use Smith's way of expressing this idea, "It is the impressions of our own senses only, not those of [another's], which our imaginations copy."[5] For both Smith and Hume our understanding of the world is built entirely out of our own experiences, but imagination enriches these experiences by allowing us to see the world as (we imagine) others do, and, more generally, by giving us a tool for exploring how the objects of our experience might be related to each other.

There is, however, a significant disadvantage of the traditional reading, namely that it scarcely allows room for the exercise of imagination in the sphere of technological progress. That is, sympathetic imagination, conceived as "changing places" with another, and theoretical imagination, conceived as positing orderliness and harmony in the natural world, do not seem to accurately describe what occurs in the mind of an inventor who develops a new product or

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[1] See, for example, Charles Griswold, *Adam Smith and the Virtues of Enlightenment* (Cambridge: Cambridge University Press, 1998). For assertion that these constitute "two fundamentally different kinds of imagination," going beyond the idea that they are distinct operations of essentially the same faculty, see Knud Haakonssen, "Introduction: The Coherence of Smith's Thought," *The Cambridge Companion to Adam Smith* (Cambridge: Cambridge University Press, 2006), pp. 10 – 21, at p. 10.

[2] Adam Smith, *Theory of Moral Sentiments* (TMS), I.i.1.3.

[3] The claim that Smith's epistemology and especially his account of imagination is borrowed from Hume is well attested among scholars. See, e.g., A.S. Skinner, "Adam Smith: science and the role of the imagination," in ed. W.B. Todd, *Hume and the Enlightenment: Essays Presented to Ernest Campbell Mossner* (Edinburgh: Edinburgh University Press, 1974), and D.D. Raphael, "'The true old Humean philosophy' and its Influence on Adam Smith," in ed. G.P. Morice, *David Hume: Bicentenary Papers* (Austin: University of Texas Press, 1977).

[4] David Hume, *A Treatise of Human Nature*, 1.2.8.

[5] TMS I.i.1.2.

way of doing things. Consider Smith's description of a boy who invents a mechanism for automating his work as a valve actuator:

> In the first fire-engines, a boy was constantly employed to open and shut alternately the communication between the boiler and the cylinder, according as the piston either ascended or descended. One of those boys, who loved to play with his companions, observed that, by tying a string from the handle of the valve, which opened this communication, to another part of the machine, the valve would open and shut without his assistance, and leave him at liberty to divert himself with his play-fellows. One of the greatest improvements that has been made upon this machine, since it was first invented, was in this manner the discovery of a boy who wanted to save his own labour.[6]

It may be the case that this inventive boy is motivated by "changing places in fancy" with his playfellows and discovering the joy to be had outside of the factory. And it may also be the case that an exercise of imagination brings him to comprehend the working of the engine and the regularity of its moments. But neither of these exercises of imagination is sufficient for explaining how the boy could conceive of a way of excising himself from the role he played in the engine by developing a mechanism that exploits the engine's own pattern of movement. Technological invention, in other words, is a product of imagination, but not simply sympathetic or theoretical imagination. Unless we want to concede that Smith left a significant lacuna in his account of imagination, then, an alternative account must be provided that is capable of explaining technological applications of imagination on par with moral and philosophical applications.

The purpose of this paper is to provide such an account. Our goal, however, is not to reject other accounts, so much as it is to enrich them. Where other scholars have described imagination's operation as varying in accordance with the domain in which it is exercised, we propose to describe it as varying in accordance with what we call the "mode" of its operation. For Smith, we contend, our faculty of imagination may be exercised in either a discovery mode or a creative mode, with the former tending to operate closer to our personal impressions and the latter farther way. As we will show, either mode may be exercised in any domain, but each domain imposes unique boundaries on imagination's mode of operation.

A secondary, but equally important contention of this paper is that this account of imagination is indicative of the unity of Smith's work. In particular, we argue that Smith's discussion of imagination is consistent across all of his works, and that his complete account emerges only after we account for what he has to say in the *Wealth of Nations,* as opposed to focusing primarily on the *Theory of Moral Sentiments* and *History of Astronomy* as other commentators have done.

1. A Humean Conception of Imagination

There are two features of the traditional reading of Smith's account of imagination that are indisputable. The first is that Smith explicitly describes two different domains – the practical and the theoretical – in which imagination is deployed. Whether Smith means to draw a sharp distinction between these domains, and whether these are the only ways in which imagination

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[6] *Wealth of Nations* I.i.9.

operates, is a matter to which we will return, but we must begin our discussion with the second important consensus in the existing literature: that Smith's account of imagination is broadly Humean.

Hume describes imagination as a mental operation akin to memory. "Both these faculties borrow their simple ideas from the impressions, and can never go beyond these original perceptions."[7] We are able to differentiate acts of imagination from acts of remembering only through the "superior force and vivacity" of memory.[8] Imagination is dim and weak, both in comparison with memory, and even more so in comparison with the original impressions. Further, imagination "transposes and changes" ideas rather than, as memory does, faithfully presenting them in the order in which they were received by the senses.[9]

This last feature largely informs imagination's distinctive function, namely to posit connections between our experiences. Specifically, imagination compensates for the fact that sensory perception is limited to discrete and distinct impressions by manufacturing accounts of how those impressions are related to one another.[10] It is through imagination that we generate the notion of continuity of existence, for example.[11] This function is exercised not for its own sake, though, but for the way it quells the anxieties and agitations of our mind when we are confounded by seemingly incoherent impressions.[12] Imagination returns us to tranquility by persuading us that there is order in our universe.

Smith endorses all the features and the function of imagination in Hume's account. Consider, for example, this passage from the beginning the *Theory of Moral Sentiments*:

> It is the impressions of our own senses only, not those of his, which our imaginations copy. By the imagination we place ourselves in his situation, we conceive ourselves enduring all the same torments, we enter as it were into his body, and become in some measure the same person with him, and thence form some idea of his sensations, and even feel something which, though weaker in degree, is not altogether unlike them.[13]

Here, imagination is limited to drawing on our own sensory impressions. The idea generated through the act of imagining is "weaker in degree" than the impressions present to the person actually enduring the situation, or than the impressions that would be present to us were we to actually endure it. It involves a transposition of ideas—in this case, positing a change of situation for ourselves. And imagination performs the function of positing an account or model for a set of experiences. Prospectively imagining ourselves in the place of another allows us to predict how they will behave, and retrospectively doing so provides us with a tool for making sense of the sentiments of others when they appear discordant with our own.[14]

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[7] *A Treatise of Human Nature*, 1.3.5.3.

[8] Ibid. 1.3.5.3.

[9] Ibid. 1.3.5.3.

[10] THN 1.1.5.1 and 1.3.1.1.

[11] THN 1.4.2.20-21.

[12] THN 1.4.2.36.

[13] TMS I.i.1.2.

[14] Note that while Smith's account of imagination largely follows Hume's, Smith seems to allow that imagination can utilize ideas in anticipatory manner (that is in situations where ideas are not precipitated by impressions) –

It is in Smith's earlier work, *History of Astronomy*, however, where he most clearly embraces the functional aspect of Hume's account of imagination. There Smith describes science as leveraging the imagination to build accounts of nature that accommodate seemingly anomalous observations. It is via imagination that the scientist posits relationships *not* directly observed between events that are. Scientific theories are more or less successful in accordance with the greatness of their power for accommodating observations. Newton's theory of gravity–a favorite of Smith's– succeeds because it is "a system whose parts are all more strictly connected together, than those of any other philosophical hypothesis."[15] Nevertheless, Smith cautions us–in a passage starkly reminiscent of Hume–to hold Newton's principles at arm's length lest their explanatory power lure us into believing that "they were the real chains which Nature makes use of to bind together her several operations."[16] However significant the scientific account may be, Smith reminds us that "all philosophical systems [are] mere inventions of the imagination."[17]

Smith even adopts Hume's theory of motivation for imagination. He says that the intellectual sentiments of wonder and surprise, which agitate us, inspire the scientist to manufacture their clever accounts, all in an effort to return to the pleasures of mental tranquility. This point is most explicit in his discussion of Apollonius' achievements: "nothing can more evidently show, how much the repose and tranquility of the imagination is the ultimate end of philosophy."[18] Prior to Apollonius, astral observations "had appeared inconstant and irregular."[19] The effect of this seeming incoherence was that they "tended to embarrass and confound the imagination, whenever it attempted to trace them."[20] Apollonius' account of Eccentric Spheres, Epicycles, and of the revolution of the centres of the Eccentric Spheres gained traction precisely because it "tended to allay this confusion, to connect together those disjointed appearances, and to introduce harmony and order into the mind's conception of the movements of those bodies."[21]

Cite Schliesser AS 3.C Smith also reveals in other passages that this model of imagination powers his conception of the impartial spectator, whose judgments play an important role in motivating us to bring our actions and judgments in line with the expectations of others, as well as a mechanism for reconciling ourselves to cases where our judgments cannot be reconciled with those of others (TMS II.ii.2.1.).

[15] HA IV.76

[16] HA IV.76. Hume makes this argument in *A Treatise of Human Nature* 1.4.2, "Of scepticism with regard to the senses." See D.D. Raphael, "'The true old Humean philosophy' and its Influence on Adam Smith," in ed. G.P. Morice, *David Hume: Bicentenary Papers* (University of Texas Press, Austin: 1977), for discussion of how Hume's insistence that imagined connections are "fictions" differs from Smith's characterization of them as "inventions," and what implications this may have for their respective theories of the possibility of scientific knowledge. See also R.P. Hanley, "Scepticism and Naturalism in Adam Smith," in eds. Vivienne Brown and Samuel Fleischacker, *The Philosophy of Adam Smith* (London: Routledge, 2010), pp. 198–212, for a persuasive argument that Smith followed Hume's naturalism more so than his skepticism.

[17] Ibid. IV.13.

[18] HA IV.13.

[19] Ibid. IV.13.

[20] Ibid. IV.13.

[21] HA IV.13. The fuller passage makes imagination's role in restoring tranquility to the mind even clearer. Smith notes that, although Apollonius' ideas referenced above succeeded in introducing "uniformity and coherence" into our understanding of the direction of movement of the heavenly bodies, they did so imperfectly. Specifically, the

2. Invention and Technological Progress

If it is relatively settled in Smith scholarship that Smith's conception of imagination in the *Theory of Moral Sentiments* and *History of Astronomy* is Humean, it is less well-attested whether *The Wealth of Nations* follows the same script. Of course, as a systemic account of our social world, *The Wealth of Nations* itself is plausibly an "invention of the imagination," as Charles Griswold has observed.[22] But this perspective does not account for the role imagination plays internal to the theory of that text. More promising is the conjecture, also advanced by Griswold (among others), that Smith's story of economic progress driven by the division of labor is premised on the idea that individuals are motivated by what their imaginations present to them as ways of bettering their condition.[23] Unfortunately, this view, at least as it has been presented in literature, to specify how imagination plays this role. In particular, it is not clear how a general desire to better our condition manifests itself in particular exercises of the imagination, or why we should expect the exercise of imagination to drive the kind of technological progress that Smith says is both an inevitable consequence of the division of labor as well as something that in turn facilitates further specialization.

The importance of imagination to Smith's account of economic progress is clear from the very outset of *The Wealth of Nation*. Consider what Smith says about the relationship between invention and the division of labor in the opening chapter:

> A great part of the machines made use of in those manufactures in which labour is most subdivided, were originally the inventions of common workmen, who, being each of them employed in some very simple operation, naturally turned their thoughts towards finding out easier and readier methods of performing it.[24]

Innovation in the design of machines and the workplace are "natural" developments when work is specialized. The attention that an individual devotes to a singular task admits a privileged understanding of the processes involved in the task, and this understanding is the springboard of technological invention. For example, the boy who invents a mechanism for automating the work of actuating a valve in a fire-engine has the power of invention not so much through any genius as through his familiarity with the operation of the machine.[25]

The question for us is whether invention is a product of the imagination, and, if so, whether the conception of imagination that Smith leans on to account for technological

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ideas of Eccentric Spheres and Epicycles were not enough to account for the observed velocities of objects which "remained, in some measure, inconstant as before; and still, therefore, embarrassed the imagination." It was the invention of the Equalizing Circle that was the real achievement of imagination. With it "The mind found itself somewhat relieved from this embarrassment, when it conceived, that how irregular soever the motions of each of those Circles might appear, when surveyed from its own centre, there was, however, in each of them, a point, from whence its revolution would appear perfectly equable and uniform, and such as the imagination could easily follow. Those philosophers transported themselves, in fancy, to the centres of these imaginary Circles, and took pleasure in surveying from thence, all those fantastical motions, arranged, according to that harmony and order, which it had been the end of all their researches to bestow upon them."

[22] Griswold, "Imagination," p. 50.

[23] See Griswold, "Imagination," p. 23, and Haakonssen, "Introduction," pp. 10 – 11.

[24] WN I.i.8.

[25] WN I.i.8. The machine Smith describes as a fire-engine was an early example of the steam engine.

invention is consistent with the Humean conception that he leans on elsewhere. We contend that the answer to both parts of this question is yes. Inventors who improve upon existing machines, for instance, typically generate their ideas on the basis of sensory impressions of how the machine performs its task, with the ideas themselves being suppositions about how to fill in gaps between impressions. Recall the boy who invents the automatic valve actuator. His work as a manual actuator requires him to observe the regular motion of the machine's piston; his task being to "open and shut alternately the communication between the boiler and the cylinder, according as the piston either ascended or descended."[26] The boy has discrete impressions of the parts of the machine, of their movements, and of the timing of their movements. These impressions are crucial to his ability to coordinate his own actions and thereby operate the valve correctly. In an observant boy, these impressions are also apt to generate ideas of the regularity and interdependency of the machine's movements. And, having noticed the synchrony between the machine's movement and his own, a supposition emerges that the unobservable tether that synchronizes his own movements with those of the machine may be materialized with an actual string. The boy "invents", however, not just when he supposes that such a string would maintain order and harmony between the parts of the machine, but when he manifests this materially.[27] Moreover, in becoming observable, the boy's invention can then figure in the impressions of future operators of the machine, and, as a result, may fuel further inventions and improvements.[28]

Not all inventions are improvements upon existing machines, though, nor are users of machines the only contributors to technological improvement. Smith notes that "makers of machines" carved off their own specialized trade and that "those who are called philosophers or men of speculation" have even contributed to such progress.[29] What he says of the philosopher, in particular, invites a Humean analysis. The trade of philosophers, by which he seems to mean something that includes what we today associate with scientists, is "not to do anything, but to observe everything," because, in doing so, they become "capable of combining together the powers of the most distant and dissimilar objects."[30] The idea that philosophers

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[26] WN I.i.8.

[27] This differentiates technological invention from scientific or philosophical invention, which trades in systematic description rather than in material ordering. Smith compares scientific systems with material machines explicitly in HA IV.19: "Systems in many respects resemble machines. A machine is a little system, created to perform, as well as to connect together, in reality, those different movements and effects which the artist has occasion for. A system is an imaginary machine invented to connect together in the fancy those different movements and effects which are already in reality performed."

[28] This fits with Smith's claim, in LRBL I.v.34 that "machines are at first vastly complex but gradually the different parts are more connected and supplied by one another." The passive voice ("are more connected and supplied") obscures the mechanism of improvement, but invention is undoubtedly the process.

[29] WN I.i.9. Indeed, in a discarded passage from an early draft of *The Wealth of Nations* (ED 2.ii) Smith suggests that it was "probably a philosopher who first thought of harnessing both wind and water, especially the former, for the purposes of milling," and, of the fire-engine we discussed in the previous paragraph, he conjectures that it was "a real philosopher only" who could invent such a thing. For further discussion of how Smith conceived of philosophers qua scientists contributing to technological invention see the editors commentary in R.H. Campbell and A.S. Skinner (eds.), *An Inquiry into the Nature and Causes of the Wealth of Nations* (Indianapolis: Liberty Fund, 1981), p. 21 n.22.

[30] WN I.i.9.

are "combining" objects that are distant and dissimilar is both figurative and material. The "combination" first occurs figuratively when, in their imaginations, the philosopher draws connections between distant ideas, just as the inventive boy drew a connection in his imagination between the piston and the valve he was operating. And, like the boy, the ideas the philosopher combines must be drawn from their observations of the world. The difference between the philosopher and boy thus lies in how broad the scope of experiences the philosopher draws on, and in the degree of speculation or abstract theorizing they are engaged in. Just as was the case with the boy, though, to count as an invention the combination of ideas imagined by the philosopher must ultimately be made material in some way, for example through the actual building of a machine.

Imagination in the technological sphere thus operates with the same Humean mechanisms we observed in the theoretical and social spheres. But how should we account for the initial impetus to imagine in the technological domain? As we saw earlier, scholars have argued that imagination is motivated, in the economic domain as much as any other, by a general desire to "better our condition."[31] And Smith does say of the boy working the valve on the fire-engine that he "loved to play with his companions," and that the invention of automated valve actuator afforded him "liberty to divert himself with his play-fellows."[32] But how exactly does the desire to better his condition lead the boy to invent a better fire-engine? The key to understanding this is to appreciate the relationship between our labor and the machines that augment it. Labor and machinery are both elements in the production of goods, and it's precisely because the automated valve actuator provides a substitute for his labor that the boy is able to play rather than work. Just as it does in the theoretical realm, then, imagination manifests itself in the boy inventor's mind in the rearrangement of ideas – in this case substituting a string or mechanical tether for the role he previously played synchronizing the movements of the fire-engine's piston and valve – and by providing an effective substitute for his labor the boy's invention thereby establishes a new order and harmony in the workplace.[33]

Two things are worth noting about the account of imagination and technological progress sketched above. First, they highlight a terminological defect in the distinction between sympathetic (or practical) imagination, on one hand, and theoretical imagination on the other. That defect is that, although invention and technological progress seem to involve exercises of the theoretical imagination on par with the development of theories in the scientific domain, invention is a practical enterprise. While an inventor might imagine inventions that are never brought to life – as many of Da Vinci's designs never were, for instance – the goal of the inventor is almost always to design something that could be created. And, as Smith's discussion of invention suggests, the scientist and the inventor are often one in the same.[34]

Second, although invention may look like an exercise in theoretical imagination along, Smith's account of the boy inventing the automatic valve actuator suggests that sympathetic

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[31] See, for example, Griswold, "Imagination," p. 23.

[32] WN I.i.8.

[33] Fully automatic machines will be improved in this way, too, when they are made simpler—saving our labor by, for example, reducing the number of parts in need of maintenance.

[34] Note about Smith's role in getting Watt appointment at Glasgow.

imagination is also at work there. Specifically, imagining himself in place of his prospective play-fellows provides the boy a motive to find a substitute for his labor. Nor is the boy's situation unusual in this regard. Moreover, a closer look at Smith's discussion of the paradigmatic products of theoretical imagination – the grand theories of astronomy and physics – suggests that, even there, something like sympathetic imagination is at work. As Griswold has argued, Smith characterizes science as a "spectatorial endeavor" and repeatedly invokes the metaphor of the "theatre of nature."[35] Indeed, in his discussion of Apollonius's idea of Equalizing Circles, Smith uses language remarkably similar to his characterization of sympathy, describing philosophers as "transport[ing] themselves, in fancy, to the centres of these imaginary Circles."[36] And, although this spectatorial endeavor may not involve sympathizing with other persons, as we've already seen, it is intimately bound up with the sentiments insofar as it is apt to give rise to wonder, surprise, and admiration (or insofar as we tend to engage in such activities in order to quell these sentiments). In other words, if we want to paint a complete and consistent picture of the role imagination plays in Smith's work we can't simply redeploy the distinction between sympathetic and theoretical imagination, even with new labels in their places. Instead, we need to enrich our picture of the ways in which imagination operates.

3. Two Modes of Imagination

We propose enriching the picture of Smith's account of imagination by introducing a new distinction between two modes in which imagination operates: the *mimetic* and the *creative*. Crucially, this distinction is intended to complement rather than supplant the distinction between sympathetic and theoretical imagination. In particular, where the previous distinction emphasized the object of imagination, this distinction highlights a difference in how imagination plays the role of helping us form ideas. The mimetic mode involves agents drawing on their individual stocks of impressions, ideas, and experiences and using these to fill in the gaps in their understanding of a situation they find themselves confronting. In this mode, imagination borrows things from our memory and inserts them relatively faithfully into new contexts. And, as we read Smith, this is the typical and more straightforward way in which imagination operates. What we call the creative mode, on the other hand, is neither straightforward nor common. In this mode, imagination leverages the ability to rearrange ideas to generate more speculative accounts of how the world might be. These accounts are complex because they typically involve at least one *relatio* and many *relata*, but, more important is the fact that the *relata* creative imagination brings together can be quite distant and seemingly unconnected.

As we will see, on Smith's account the two modes of imagination each play important roles in facilitating our ability to navigate the social world, achieve mental tranquility, and better our material condition. As a result, the distinction not only helps us understand how imagination works in various contexts, but in addition helps us appreciate one of the ways in which Smith's thought is unified across his wide-ranging corpus.

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[35] Griswold, *Adam Smith and the Virtues of Enlightenment*, p. 69. Smith invokes the "theatre" metaphor at HA II.12, IV.13, as well as in the *History of Ancient Physics* (HAP 2).

[36] HA IV.13

Smith illustrates imagination's mimetic mode by appealing to ordinary experience, and the paradigmatic instances of this arguably comes in his account of sympathy. There he offers the example of witnessing a blow about to be struck on another person and recoiling ourselves in anticipation, watching a dancer on a slack rope and twisting and writhing in response, or passing by someone with visible sores and scratching the corresponding parts of one's own body.[37] In each of these cases, Smith suggests that it is imagining ourselves in the situation of the other that both supplies our sense of what the other feels and induces o8ur response. Indeed, while such responses might often seem to happen instinctually and without deliberate thought, for Smith the mechanism at work is nevertheless imaginative insofar as it involves "changing places in fancy" with the other, however briefly.

The precise role imagination plays in sympathy, and the fact that it draws from and is constrained by our own experiences, is even clearer when we look at Smith's discussion of sympathy with joy, grief, and, especially, our tendency to sympathize with the dead.[38] For instance, Smith has us imagine ourselves passing by a stranger displaying obvious signs of sorrow and learning that this person has just received news that his father has died (I.i.3.4).

> Yet it may often happen, without any defect of humanity on our part, that, so far from entering into the violence of his sorrow, we should scarce conceive the first movements of concern upon his account. Both he and his father, perhaps, are entirely unknown to us, or we happen to be employed about other things, and do not take time to picture out in our imagination the different circumstances of distress which must occur to him. We have learned, however, from experience, that such a misfortune naturally excites such a degree of sorrow, and we know that if we took time to consider his situation, fully and in all its parts, we should, without doubt, most sincerely sympathize with him. (*TMS* I.i.3.4)

We can, through exercise of our imagination, "picture out" the stresses suffered by the grieving son. We are capable of appreciating that the man's situation is deserving of sympathy even before we engage in such imagining—and even in lieu of exerting the effort—but to actually do the imaginative work is to supply salient information from our own bank of memories and, therefore, to shape our understanding of his situation in accord with a fuller or unabridged account of his situation. Note, then, that this mode of imagination straightforward only in the sense that it is bound to the imaginer's stock of experiences. The "imagining" that is exercised is not at all the abstract or fantastical ideation that we might ordinarily associate with imagination. It is simply projection of a familiar idea onto a new situation. And it is common in the sense that Smith seems convinced that everyone, or nearly everyone, is able to exercise it to some degree. Hence his assumption that his readers will find the phenomenon quite familiar.

While the mimetic mode of imagination may be ubiquitous, the creative mode is a more extraordinary feat of imagination's epistemic function. Where Smith describes its exercise, he often associates it with philosophy and lauds it as inventive and wondrous. Recall, for example, our discussion in the previous section of the grand theories of astronomy and physics or of the role the philosopher plays in invention. There we saw that imagination is not limited to drawing

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[37] TMS I.i.1.3

[38] Joy and Grief TMS I.i.1.6-9, Feeling passion the other is incapable of TMS I.i.1.10, Dead TMS 1.i.1.13

on ideas that narrowly reproduce the imaginer's stock of experiences. Indeed, in positing unobserved (and perhaps unobservable) laws of nature, or in proposing altogether new ways of harnessing the forces of nature, science and philosophy are capable of – and sometimes must – transcend past impressions and offers radical alternatives to traditional ways of thinking. That is, when exercised in the creative mode, imagination involves new ways of arranging ideas. And, in keeping with it being a sharp departure from conventional thinking, the creative mode of imagination is much more rarely exercised, whether by individuals or among a population, than is the mimetic mode.

As we suggested above, though, what we call the creative mode of imagination is not just an alternative way of conceptualizing the theoretical imagination. The creative mode of imagination is crucial to science and invention, but mimetic imagination is important there as well. Although it may have taken a radical exercise of creative imagination to first posit how an engine might be constructed so as to harness the power of steam to turn a driveshaft, the boy who invents the automatic valve actuator need not engage in such a creative leap. His own experience synchronizing the movements of a fire-engine's piston and valve is enough to generate in him the idea that his role linking these movements might be replaced by a mechanical tether. And, on the other hand, creative imagination is sometimes at work in our moral evaluations of ourselves and others. That is to say that the impartial spectator through which we generate our judgments of propriety is largely a product of mimetic imagination, but, as we will see, it also makes room for and sometimes even facilitates exercises of moral entrepreneurship. Furthermore, economic progress is not just, or even primarily, a function of technological progress. Instead, economic progress is driven by trade, and trading relationships often depend on exercises of both mimetic and creative imagination.

In what remains of the paper we explore how both modes of imagination are crucial to the accounts of sympathy and moral evaluation we find in the *Theory of Moral Sentiments* (section 4), trade and the division of labor in the *Wealth of Nations* (section 5), and of science that we find in *History of Astronomy* and some of Smith's other essays (section 6). Finally, we conclude (section 7) by suggesting that, although both modes of imagination are important, it's the creative mode that we contend ultimately plays the more important role in the accounts of moral, economic, and scientific progress that lie at the heart of *The Theory of Moral Sentiments*, *Wealth of Nations*, and *History of Astronomy*.

4. Imagination in *The Theory of Moral Sentiments*

That imagination is a crucial cognitive faculty in Smith's theory of moral and social development is clear. It is the mechanism through which we generate the standpoint of the impartial spectator that governs our moral evaluations of ourselves and others. Specifically, the impartial spectator is the product of an agent's consideration of what judgments an onlooker would be expected to make about her behavior balanced against her own judgments that might be informed by special knowledge of her motives or circumstances that might not have been transparent to an onlooker. At first glance, the impartial spectator might seem to be a product of imagination operating in the mimetic mode, and this is more or less correct, as has been well documented by other scholars, although they have not used this terminology. After all, the impartial spectator is a projection of our imagination that draws on the, perhaps motley, collection of experiences, feelings, perceptions, etc., that we accrue across a lifetime, where

this collection crucially includes vast experience with how other agents judge the behavior of ourselves and others. The standpoint of the impartial spectator thus gives us a crucial mechanism for checking the partiality of our judgments, as well as the incompleteness of the information on which these judgments are based. Because it is built up from our own judgments and our familiarity with the judgments of others, though, the judgments of the impartial spectator are still partial insofar as they are limited by the extent of our experiences.

Crucially, however, although the impartial spectator might be a product of mimetic imagination, Smith clearly recognizes a role for creative imagination in moral judgment. This can be discerned especially in Smith's discussion of individuals who possess spectacular skill in making moral judgments. He first describes such a person in the context of explaining that we find most pleasant those people whose sentiments mirror our own. "But when they not only coincide with our own, but lead and direct our own; when in forming them he appears to have attended to many things which we had overlooked, and to have adjusted them to all the various circumstances of their objects; we not only approve of them, but wonder and are surprised at their uncommon and unexpected acuteness" (TMS I.i.4.3). This moral exemplar is distinguished as a leader, as uncommonly observant, and surprisingly acute in assessing salient connections. This language already suggests the creativity of the philosophical inventor in *The Wealth of Nations*, but Smith goes further:

> The decision of the man who judges that exquisite beauty is preferable to the grossest deformity or that twice two are equal to four, must certainly be approved of by all the world, but will not, surely be much admired. It is the acute and delicate discernment of the man of taste, who distinguishes the minute, and scarce perceptible differences of beauty and deformity; it is the comprehensive accuracy of the experienced mathematician, who unravels, with ease, the most intricate and perplexed proportions; it is the great leader in science and taste, the man who directs and conducts our own sentiments, the extent and superior justness of whose talents astonishes with wonder and surprise, who excites our admiration, and seems to deserve our applause: and upon this foundation is grounded the greater part of the praise which is bestowed upon what are called the intellectual virtues. (*TMS* I.i.4.3)

Smith surely does not mean that the individual who judges well in the moral sphere and adopts praiseworthy sentiments is a "man of taste" or a mathematician, but he does suggest here there the moral domain may be mastered and known as well by its proper expert as these other domains are mastered by theirs. The moral expert—like the mathematician and the "man of taste" who attend to their respective domains with the discernment and acuity of philosophers—is implied to be endowed with uncommon cognitive gifts. But Smith doesn't just seem to mean that the moral expert is especially attuned to the judgements of others. Instead, she is liberated from the bond to what is familiar and granted liberty to posit what has not been observed, what has never been held as an actual judgment by another, what, in other words, allows for moral aspiration.

To cast this in Smithian terms, it allows us to pursue what is praiseworthy above what is merely praised (III.2.1). Of course, Smith declares generically that "man naturally desires, not only to be loved, but to be lovely; or to be that thing which is the natural and proper object of love," implying that *all* human beings pursue what is praiseworthy above what is praised. But he does not mean that all human beings succeed in satisfying this desire. It is the person of

virtue who is able to successfully track what is praiseworthy and blameworthy and mold their own sentiments and conduct in accord with those standards. Because consultation of the impartial spectator via imagination is the cognitive exercise by which we make our pursuit of praiseworthiness, it must be that any difference between the ordinary moral agent and the virtuous one is located in their different ways of doing such imagining.

All people are bound by their own experience in imagining their impartial spectator. That is the message Smith conveys when he says that "the man who is conscious to himself that he has exactly observed those measures of conduct which experience informs him are generally agreeable, reflects with satisfaction on the propriety of his own behaviour" (III.2.7). But the ordinary agent and the person of virtue, though both are bound to their personal stock of experience, differ greatly in how they relate the various elements of their experience to one another and to the present moral situation that calls for their judgment. In calling forth memories of behavior being praised, the ordinary moral agent is limited in his ability to assess the true praiseworthiness of such behavior. The person of virtue, to the contrary, is empowered by knowledge of the good and confidence in its value. Her impartial spectator is imbued with virtue, a paradigm of what Smith describes as the height of moral wisdom: "To obtain the approbation of mankind, where no approbation is due, can never be an object of any importance to him. To obtain that approbation where it is really due, may sometimes be an object of no great importance to him. But to be that thing which deserves approbation must always be an object of the highest" (III.2.7).

To enter into the judgments of such an impartial spectator, a moral agent must be capable of bringing together quite dissimilar and far distant notions. Where memory serves to illustrate an immediate connection between praise and, say, heralding of traditionally held beliefs, a more advanced moral agent may observe a connection, in her imagination, between praise and the challenging of beliefs. Experience does not illustrate this connection through examples, but it may afford the material out of which an act of imagination may create the connection. Socrates–no doubt present to Smith's mind–drew such a connection in his imagination. It certainly was not illustrated plainly for him among his fellow Athenians. But through an exercise of imagination, he was able to draw together two notions that lay quite far apart in his experience. He created something new, and he imbued his *daimonion* with the consequent value judgment, thereby setting the invented morality as his own standard. Accordingly, this affords the possibility of moral progress for the individual and perhaps also for the collective insofar as the Socrates' are engaged sufficiently for shifting the equilibrium of mutual sentiments.

5. Imagination in the *Wealth of Nations*

Having suggested that the mimetic and creative modes of imagination are both crucial to Smith's account of invention, that in turn is crucial to his account of economic progress, it's worth noting that the vast majority of mentions of "imagination" in *Wealth of Nations* cast the operation of imagination negatively – that is, as failing in its epistemic function. This need not worry us, though. Inventions can be critical to technological progress even if most inventions are fruitless. Moreover, the role of imagination in explaining economic prosperity is not limited to the part in plays in driving technological progress. Instead, the economic import of imagination is seemingly multiplied due to the fact that economic activity involves both a social

dimension and a technological dimension. That is, even when economic agents are not engaged in invention, they are pressed upon to utilize their imaginations for "forming any conception" of the self-interested motives that will facilitate their successful exchange of goods with other agents.

As an example of this social dimension of economic imagination, consider what Smith says of the utility of currency:

> Every prudent man in every period of society, after the first establishment of the division of labour, must naturally have endeavoured to manage his affairs in such a manner, as to have at all times by him, besides the peculiar produce of his own industry, a certain quantity of some one commodity or other, such as he imagined few people would be likely to refuse in exchange for the produce of their industry. (*WoN* I.iv.2)

Individual success in the market requires an exercise of imagination for finding out what "few people would be likely to refuse" in a trade. This is no meager exercise of mind. To think universally about the needs and desires of human beings is to generalize from greatly varied and often divergent preferences. As evidenced many times over in human history—Smith says, "in all countries"—the human imagination has done more than only discover a consumable good that is universally desirable (*WoN* I.iv.4). Instead, it has *created* the desirability of coinage, a purely instrumental good which could have no value to us whatsoever, and certainly not universal value, if not for a shared—perhaps even universal—capacity to imagine it as a worthy item to exchange for even the most excess of our labors and products of our labor. However, while it may have been an act of imagination in its creative mode that first gave rise to the idea of utilizing metals for exchange, in most times and places the mimetic mode is all that is needed by the general population who will have an extensive catalog of experience in observing individuals trade their goods for coinage of a particular type.

Nor is imagination only important for explaining how a medium of exchange might become widespread. The mimetic mode of imagination is also important in enabling a merchant to ascertain where there will be a market for her goods. Of course, there is no guarantee that such exercises of imagination will bear fruit, as we see in Smith's discussion of the ancient Roman agriculturalist Columella who Smith suggests was motivated to plant additional vineyards across his properties on the basis of "imagined" profit from such use of his land (*WN* I.xi.b.27). What matters ultimately matters is that, even when it fails in its epistemic function, can be a driver of economic decision making. In fact, what is arguably one of Smith's most influential observation that "the division of labour is limited by extent of market" is emblematic of the role that imagination plays in driving economic decision making.[39] This is because the reason that the division of labor is limited by the extent of the market is because the extent of market bounds the gains from trade and so the returns to specialization. Decisions about what goods to produce and in what quantities are thus functions of both our imagination's ability to posit what the market for those goods will be, and how we might produce the good.

[39] WN I.iii

6. The Role of Imagination in Science

We already saw in section 2 that Smith's account of science and invention motivates a need to distinguish between the creative and mimetic roles of imagination. What we did not emphasize there, though, was that the mimetic mode of imagination is crucial to science. In particular, it is the everyday observations that manifest themselves in seeming regularities in the universe, that allow us to be surprised by observations that don't fit with our preconceived notions of how the world works. In other words, the mimetic imagination often creates the preconditions for engaging the sentiments that motivate the exercises of creative imagination through which these sentiments can be quelled.

7. The Scope of Imagination and the Bounds of Community

Having drawn a distinction between the mimetic and creative modes of imagination, we want to conclude by suggesting that Smith's bipartite account of imagination allows him to resolve a puzzle otherwise presented by the limits of our imaginative capacities. As Smith recognized, and as contemporary empirical research has borne out, there are limits to our capacity for imagination. Our ability to sympathize with others diminishes as they (or the circumstances they inhabit) become more different from our own, and our ability to predict how things will turn out diminishes as we begin to imagine circumstances that differ substantially from those with which we have had experience. A significant worry about the limits of imaginative capacities is that these limits can be self-reinforcing, and so can push us to be more parochial. However, once we account for the creative role of imagination, the limits on our imaginative capacities can be seen to sometimes push us to become less parochial. More specifically, because our ability to innovate is limited by the extent to which our capacity for creativity is limited, we benefit from living in community with other individuals whose creative capacities are different from our own. This then points to a heretofore unappreciated aspect of the relationship between *The Wealth of Nations* and *The Theory of Moral Sentiment.* The limits on our imaginative capacities act as a governor that prevents us from expanding our circle of sympathy as far as we might. As a result, the extent of the market (and the socializing force it brings with it) is similarly limited. However, because we have limited imaginative capacities we benefit from living with others who have different limits, and so the limits on our imagination can (in the right circumstances) create a driving force for expanding our social circles.