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ABSTRACT
        Noting that discussions about the interaction of
science and politics are often heard, this paper addresses how these
discursive arenas are defined and distinguished. It argues that
political and scientific discourse may be distinguished by the roles
they assume on the rhetorical stage, and the relevant roles which
emerge are implementers and investigators. The paper first defines
and elaborates on these roles, then states that rhetoric of inquiry
first emerges when discourse is appropriated by different audiences
or is placed in a different genre--for example, the appropriation by
different audiences might occur when a debate within a scientific
community becomes a topic for discussion beyond the context of
academic journals or laboratory experiments. The paper states that
another situation that calls attention to rhetoric of inquiry
involves the shift and possible conflict among different standards
for testing and certifying truth claims--the idea of reality held by
a community may be understood by examining how it establishes and
tests what it considers true. The paper cites three conditions for
conflict between implementers and investigators: perceived antitheses
between political and intellectual endeavors; epistemological
division between pure and applied knowledge; and the separation of
power from knowledge. The major part of the paper examines the
philosophical basis of these conditions in relation to scenarios in
which they become actualized, citing scientific method in
intellectual history and focusing on Nazi political discourse
regarding racial science. Based on the ideas of Habermas and
Foucault, the paper concludes that investigation and implementation
interact dynamically. (Includes 60 notes.) (NKA)

Implementers and Investigators:
Conditions for Rhetoric of Inquiry to Emerge

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We often hear discussions about how science and politics interact, but how are these discursive arenas defined and distinguished? Political and scientific discourse may be distinguished by the roles they assume on the rhetorical stage. Two relevant roles emerge: implementers and investigators. These roles offer an opportunity for rhetoric of inquiry to enter the picture. The conduct of racial science in Nazi Germany illustrates how implementation and investigation interact and permit rhetoric of inquiry to emerge.

Distinctions Between Implementation and Investigation

Implementers consist of those who shape public policy directly through mandates or legislation. Implementation of policies is achieved at least partially by indoctrination. The implementer seeks to move audiences toward a predetermined objective that coincides with the communicator's intent. Compliance is the implementer's primary objective.

Investigators include the "think tanks" to whom implementers may defer for advice or whom implementers may use to justify decisions. Investigators also may influence the choice of language, methods, or the tacit assumptions employed by implementers even without consulting investigators directly. Researchers, however, are not merely parasitic on implementers. The rhetorical arsenal of the researcher consists primarily of illumination. Rather than treat audiences as means of persuasion through which a non-discursive objective can be accomplished, illumination fosters enlightenment of audiences as its ultimate goal. Indoctrination involves inducing people to comply while illumination involves revealing the truth of an issue to an audience. Investigators employing illumination purport to seek compliance solely through

rational means, which in this project means the employment of theories, terminology, research findings, and assumptions deemed scientific in their discursive context. Operationally, this scientific aura arises by invoking language characteristic of scientific investigations or by appealing to science or natural law in the abstract. The cast of those purporting to be investigators will be specified when the selection of materials is considered.

To understand the way the discursive territory is carved, it becomes necessary to delve more deeply into the nature of implementers and investigators. The relationship between investigators and implementers is summarized in Figure 1.

Figure 1. Characteristics of Implementers and Investigators

	Implementers	Investigators
Goal	Achieve compliance	Seek truth
Means	Indoctrination	Illumination
Result	Action	Knowledge

At a glance this distinction appears simplistic and untenable. That is precisely the point. The alleged simplicity and untenability of the distinction arise from a tendency to conflate rhetorical techniques and objectives in an attempt to "democratize" discourse by freeing audiences from the alleged tyranny of expertise. It is unwise to deconstruct concepts of expertise and authority without realizing how they index socially constructed images that may be traced in discourse rather than concrete or static conditions. The preceding distinctions are not epistemological categories, but observable differences between persona assumed in public forums.

The implementer and investigator roles also represent directions the socialization processes take in establishing membership in discursive communities. Alan Beyerchen, for example, studied research scientists in his book *Scientists under Hitler* because "research scientists and Nazi politicians formed two differently socialized populations with little overlap in temperament or training."[1] While the issue of temperament is debatable, especially in cases of scientists becoming political opportunists, the declared objectives of truth-seeking for researchers and of expediency for policymakers result in different discursive orientations.[2] In science, the socialization function of implementers and investigators has been examined extensively. Science per se is distinguishable from other pursuits such as law, history, and religion because science seeks consensual agreement from all rational parties that an interpretation or explanation is correct.[3] This consensus may not be actually achieved or even achievable, and it may serve as a disguised argument from authority to support "merely the unwarranted generalization of an individual intuition."[4] Nonetheless, a commonly declared goal of science is to strive toward such a consensus despite its elusiveness, although political decisions must be rendered even while recognizing that consensus is unachievable. The pressing exigency of actions that might need to be taken despite disagreement might play a role in Aristotle's desire to recognize that communal action in politics should be sought at the level of the state. Significantly, Aristotle considers political "science" applicable to different states and kinds of rule, while only truths that hold for all rational people are considered under the rubric of "pure science" (*episteme*).[5]

Historically in Germany, the implementer versus investigator distinction not only arose, but became close to a dichotomy. Indeed, the widening chasm between social activism and intellectual pursuits may have been largely responsible for the naivité of intellectuals when confronted with Nazism. The general failure of German intellectuals to offer reasoned responses

or engage in widespread active resistance to National Socialism has been labeled "one of the most disillusioning and lamentable phenomena of the Nazi epoch."[6] A contemporary observer commented prophetically that if the best minds in Germany failed to distinguish their work from the political agenda of the Nazis, then Nazism would be recognized officially as the political ideal of Germany.[7]

Informal distinctions between implementation and investigation have been recognized in discourse, although the distinctions need not imply mutual exclusivity. People are often classified as "doers" or "thinkers," the former caricatured as mindless actors and the latter lampooned as ivory tower intellectuals. The contrast between thinking and doing has long been assumed, but poorly articulated. Clearly, thinking and doing are treated in common parlance as distinct, evidenced by phrases such as "Quit talking and start acting," yet they are intertwined. This connection means that there are rarely such animals as "thoughtless acts" or "pure reason." The distinction between "strategy" and "tactics" implies a recognizable differentiation between the formal plans for an activity and the activity itself. Thus the validity of the adage "The best laid plans may go awry."

Rhetoric of inquiry occupies the sites where the interpretation or use of discourse must be negotiated as it is appropriated by different audiences or under different circumstances. The process of negotiation may by synchronic or diachronic. Synchronic negotiations occur as different audiences simultaneously attempt to cast discourse in a particular light, a process exemplified by each political party putting a "spin" on political developments that renders events favorable to that party. Diachronic negotiations involve the reexamination of the same body of discourse at different times, an activity exemplified by reassessments of historical occurrences

from feminist or minority standpoints. The synchronic and diachronic negotiations may be treated as axes of rhetorical activity, so they tend to occur in conjunction rather than offer alternative approaches.

What specific conditions call forth rhetoric as a means of negotiating the signification of discourse? At least two types of situations call attention to rhetoric of inquiry as a way to negotiate discursively disputed intellectual or social territory.

First Call for Rhetoric: Negotiating Audiences and Genres

The first condition under which rhetoric of inquiry emerges is when discourse is appropriated by different audiences or is placed in a different genre. The appropriation by different audiences might occur when a debate within a scientific community becomes a topic for discussion beyond the context of academic journals or laboratory experiments. The debate over punctuated equilibria exemplified the movement from a technical to a lay audience. In this instance, the discussions initially occupied paleontologists, then "provoked" geneticists to enter the fray, followed by a third audience of non-scientists who were "aroused" by the relationship of the controversy to creation science. [8] The appeal to or appropriation by several different audiences sequentially or simultaneously casts some doubt on the accuracy and usefulness of establishing too rigid a boundary between "social" and "technical" modes of knowledge or discourse.[9] The consensual nature of social knowledge seems to be shared within the scientific realm, suggesting that the consensual agreement of designated members of the scientific community rather than simply obedience to logical demonstration entrenches theories as norms. Even if consensual agreement is not achieved, it has been identified as a fundamental goal of scientific investigation--a goal also attributed to discourse that would unify an audience into a *polis* concerned with the common welfare.[10] The proliferation of purported experts has

threatened the very existence of a unitary social sphere. Multiple criteria for expertise require movement among many discursive communities that recognize and certify experts differently. Little opportunity seems to remain for constructing a unity of discursive realms under the rubric of a shared stake in policy decisions and intellectual endeavors.[11]

Second Call for Rhetoric: Negotiating Standards for Testing and Certifying Truth Claims

Another situation that calls attention to rhetoric of inquiry involves the shift and possible conflict among different standards for testing and certifying truth claims. The standards for judging and certifying claims as truth may be defined as audience-dependent, but they deserve recognition as an epistemic alteration that requires resolution. Since doubt can be assuaged only if the conditions for satisfying doubt are established, the status of a claim as truth depends on the criteria accepted as legitimate means for testing it.[12] Extending this line of thinking, the very objects a discursive community believes exist may be considered a function of the methods they employ to define, categorize, and establish methods for certifying a claim as true.[13] Computer usage provides an analog. The search criteria determine what users locate when they search a batch of files. The idea of reality held by a community may be understood by examining how it establishes and tests what it considers true. These conditions of shifting audiences, varying uses and interpretations of discourse, and changing conditions for establishing truth make up the circumstances addressed by rhetoric functioning as rhetoric of inquiry.

Conditions Fostering Divergence

When do implementers and investigators conflict? Three conditions foster opposition or independence: perceived antitheses between political and intellectual endeavors, the epistemological division between pure and applied knowledge, and the separation of power from

knowledge. The philosophical basis of these conditions will be examined in relation to the scenarios in which they become actualized.

Polarization of Political and Intellectual Endeavors

Francis Bacon enjoined scientists to "seek for experiments of Light, not for experiments of Fruit."[14] Put less aphoristically, researchers should prioritize work that illuminates the answers to intellectual questions being posed rather than seek immediate, tangible rewards for their inquiries. The fruits would develop from disciplined examination of the principles that make the results possible. Bacon's advice would place investigators in the service of their own research agenda. Such loyalty would be challenged by the demand that racial science produce rapid and permanent improvement of Germanic racial stock rather than become mired in "merely academic" issues. How did Nazi political discourse encourage the separation of politics from intellectual activity as traditionally epitomized by scientific inquiry in the Western tradition? What roles did this discourse play in engineering consent for Nazism?

Discourse of implementers urged a separation between traditional scientific epistemology and the racially conditioned, direct apprehension of truth. The Aristotelian epistemological split bifurcating science and philosophy (*episteme*) as contemplation of necessary truths and rhetoric as deliberation regarding contingencies was altered in the hands of Nazi implementers. Two important adjustments to the Aristotelian scheme become apparent. First, the distinction between necessary and contingent truth was retained, but the propagation of necessary truth stemming from racial knowledge was considered paramount. Instead of continuing the Aristotelian and Cartesian tradition of treating science as a path to necessary truth, the methodical procedure including systematic doubt was rejected. Scientific method, considered within intellectual history flowing through Aristotle, Descartes, and Bacon to be unitary and the

most reliable way to arrive at truth, was treated as contingent. Scientific method was pluralized and cast as dependent on the racial character of the researcher and the cultural history influencing the research questions and tacit assumptions that inevitably would find their way into any scientific investigation. This outlook on science, if stripped of its racial overtones, bears a striking resemblance to the way contemporary philosophers of science often treat scientific method if they reject its unity.[15] Method at best contributes to the production of scientific knowledge, but the Cartesian vision of a single method as the only path to universally recognizable truth now claims few adherents.

Nazi implementers introduced a second adjustment to the Platonic and Aristotelian heritage of relations between theory and practice. For Plato, the propagation of knowledge claims flounders in the realm of "mere" opinion, since truth served as its own best advocate and required persuasion only as enhancement or amplification. Aristotle granted that rhetoric employed a method, but the matters with which rhetoric deal deny it access to necessary truths. In the Aristotelian system, rhetoric may be methodical, but its status as a faculty of observing means of persuasion separates it from scientific method or subject matter, since science involves the contemplation of necessary truths. Nazi political discourse in a sense reversed the relationship between science and rhetoric.

Scientific knowledge in the Western intellectual tradition was portrayed as unreliable for several reasons. First, it hedged its claims, generating reluctant, qualified findings instead of meeting the goal of indubitable truth inherited from Aristotle and formulated by Descartes. Second, Nazi implementers employed the assumption that knowledge useful for practical affairs demanding immediate attention could not be generated by investigators insensitive to worldly

pressures that time limits and the threat of racial decay imposed on research. In effect, implementers depicted intellectuals not sympathetic to Nazism as traitors to their national and communal duty. This portrayal created a distinction between implementers and investigators on the same grounds employed by Plato and to a lesser extent, Aristotle. The intellectual was alien to public life, detached from the cares of everyday living and therefore reprehensible to the public. Finally, even if the traditional Western type of scientific inquiry did generate useful findings, they could not be generalized beyond the racial, cultural, and historical environment in which they were generated.

Exactly how did implementers advocate the divergence between implementation and investigation? The arguments against generalizability applied whenever a Nazi political program or agenda was criticized from outside the Reich. Goebbels described National Socialism as "a decidedly German phenomenon." and the 1933 "revolution was a typically German product" not subject to comparison with the French or American revolutions.[16] Major intellectual tasks, such as the direction and type of scientific research pursued, were also specific to the racial laws manifested in the development of a nation [Volk]. Science and all other endeavors were shaped by the "basic disposition" [Grund charakter] of the racially conditioned nation; "science does not therefore stand on a universal or intellectual foundation in and of itself."[17] Not only science but truth itself had no value as long as either "depart from the ground and meaning [Grund und Sinn] of life" and "reign on the peak of the absolute in pure contemplation aloof from events, high above reality, an empire of pure intellect in and of itself, representing itself."[18] The author of the preceding comment was Ernst Krieck, who summarized the official Nazi view of science in five theses articulated during a 1936 speech at Heidelberg. These doctrines--condensed to four in this

discussion--deserve more detailed explanation, since they articulate the ways science and politics were opposed unless science were reoriented to fit the conditions described.

First, the uniformity and universality of reason were denied. Rationality should be understood not as a singular form, but as "the historically successive movement of forms of nations [*Volksgestalten*]."[19] The same language employed by Ludwig Ferdinand Clauss to discuss the varieties of racial character reemerged in the political realm. Each nation, due to its racial heritage, has its own form [*Gestalt*], national character, and style. The multiplicity of "styles of knowledge" opposes the treatment of knowledge as "abstract, detached, ideological human reason."[20] This denial of a uniform human reason meshed well with the scientific "finding" by Lothar Tirala that human individuation occurred only at the level of races. Alfred Rosenberg extended the denial of uniformity to all intellectual endeavors: "It is the end of all universalistic systems that today declare themselves as such publicly to researchers."[21] Unity within a race imposed some degree of order on human endeavors, but the categorical distinctions that irrevocably separated races spiritually and culturally mandated the recognition that epistemic "styles" would vary according to race. Racial science thus explains "a deep lawfulness [*Gesetzmäßigkeit*]" inherent to racial development.[22]

Second, Krieck explained that no science arises from reason alone. The history of natural and social sciences showed that they "stood in inner linkage [*in innerer Verbundenheit*] with the racial structure and the historical task of their national sphere of life, where they arose."[23] This pronouncement placed implementers in a precarious position regarding investigators. On one hand, a universal basis for scientific rationality was denied. Simultaneously, however, the universality of racial laws was affirmed as a binding law upon all researchers. Krieck and others

escaped the apparent dilemma by claiming that racial laws operated differently for different races. There was no single, uniform racial law per se, just as rationality per se did not exist. Instead, the laws governing racial characteristics and development could be observed as uniform differences separating races and holding with equally binding force on all races.

Krieck's third and fourth points may be summarized together. The scientific doctrine based on reason alone falsely elevated the importance of objectivity beyond reasonable limits. Krieck treats objectivity as a doctrinal issue devastating to traditional Western science. Once objectivity became a cornerstone of scientific inquiry, "the traditional system of science had to collapse like a house of cards."[24] Krieck could present the Nazi view of science as conservative, an attempt to restore science to its state before Kant. Appealing to intellectual authorities such as Herder, Goethe, and Nietzsche, Krieck echoed the desire of implementers to avoid the positivistic impetus toward value-free scientific inquiry that treated emotion, race, and history as irrelevant to research. Bertrand Russell, in the first sentence of *Human Knowledge*, encapsulates the view of scientific knowledge targeted by National Socialism: "Scientific knowledge aims at being wholly impersonal, and tries to state what has been discovered by the collective intellect of mankind."[25] The very impersonality Russell praises qualified in the Nazi framework as irrelevance to immediate circumstances and indicated the insensitivity of intellectuals to the racially determined conditions in which they operated.

Finally, the demand that science be objective and value-free or value-neutral made science a contemplative activity. Science should return to the priorities set by Kant and Fichte, "who taught the primacy of practical reason and the will over cognition [*das Erkennen*]."[26] Hegel and Ranke were to blame for the shift toward contemplative knowledge, while Schopenhauer redeemed the pursuit of knowledge by showing its link to action. Science should

not lead to passivity, and this criticism of knowledge detached from action portrayed the pursuit of knowledge for its own sake much as Plato had done with his depiction of a contemplative life detached from material cares.

Pure Versus Applied Knowledge

Aristotle's distinction between pure knowledge (*episteme*) and the knowledge needed to create a useful product (*techne*) found its way into the discourse of implementers who tried to ward off critical scrutiny. The result was an attempt to separate pure knowledge from applied knowledge, a move that seemed to preserve a realm for thought detached from political practice.

The National Socialist government did distinguish scientific writing from other literature that might have had "destructive influences" because of wide distribution, especially to juveniles.[27] This distinction between "pure science" [*reine Wissenschaft*] and publicly distributed literature, however, was not firm. "Purely scientific writing" was exempt from the book banning clause of the 25 April 1935 Order of the President of the Reich Literature Chamber on Dangerous and Undesirable Literature. The President of the Reich Literature Chamber, however, recognized that scientific writing could prove to have dangerous social consequences, much as literary and political publications could "endanger National Socialist cultural well-being." Although "purely scientific writing" was "exempt from this regulation" which banned certain published works, "purely scientific writing could also be placed in the list mentioned in §1 [works banned entirely] if the Reichminister for Science, Education, and Popular Culture wishes or consents to it."[28] This qualification does show that the government wanted to maintain total discretion over which works would be banned or regulated. The absence of

criteria for defining "purely scientific writing" also shows that the boundaries between pure science and socially significant writing were fluid.

Despite the vagueness of what would qualify as pure science, the realm of pure thought or intellectual activity for its own sake was singled out as an object of ridicule. The contrast of racial science with the tradition of Western science focused on the break with speculation lacking racial considerations. The divergence between pure and applied science becomes clearer if treated less as a difference between types of research methods than as a different type of distinction: Does research proceed by finding means to achieve a given objective, or does research yield discoveries for which uses are found later?[29] The rephrasing of the pure versus applied knowledge issue permits attention to focus on how relationships between implementers and investigators affect the conduct of research and, more generally, which forces control the direction of intellectual inquiry.

Implementers and many racial scientists themselves eagerly distanced the conduct of racial science from speculative intellectual exercises divorced from practical concerns. This desire to avoid any connection with intellectual styles identified as Jewish permitted two situations to arise. First, because science was understood as intellectual speculation unrelated to racial issues and obeying the canons of objectivity and universality, it indeed remained isolated from the *polis*. This isolation often accompanied vitriolic attacks from political quarters, but science in the Baconian and Cartesian tradition was irrelevant or hostile to the Nazi mission to protect racial quality. If science were understood as racially based, then it became "political science" not simply because the political regime dictated the methods and outcomes of research, but because both racial science and Nazism interpreted natural laws similarly. Racial science in some form predated National Socialism by at least seventy years, so the development of racial

science ran a course parallel to Nazism even without a guiding political hand. Arguing that the National Socialist government would never even "think about prescribing the results of science," Minister of Science, Education, and Popular Culture Bernhard Rust noted that political intrusions into science--i.e., racially conditioned science--had become unnecessary because "a real opposition between science and the goals of the National Socialist state can never arise, because these goals are built up from the practical realization of natural laws of nature and history."[30] The comment by Rust points out the paradox of the conditions fostering divergence. Since implementers and investigators charted compatible courses, they could remain relatively autonomous because they were mutually reinforcing.

A second situation resulted from distancing racial science and the Nazi regime from science conducted in a non-racial or non-Aryan spirit. Implementation and investigation might be portrayed as independent roles as long as they did not conflict. The emergence of opposition to the principles of racial science, however, called for a different type of divergence in the spirit of a Platonic opposition between the political and intellectual personae. Resorting to a radical split between implementers and investigators offered two rhetorical advantages.

On one level, the assertion of such a bifurcation fueled claims by implementers such as Rust that scientific inquiry was not threatened by National Socialism. The rejection of certain types of science simply reasserted the right of each sovereign nation to choose its own intellectual methods according to what was compatible with its racial mission and social priorities. National Socialist arguments of this type, therefore, could appear as vigorous assertions of national sovereignty and affirmations of the inner "linkage of science with the Volk."[31]

On another level, the opposition between implementers and investigators could reinforce perceptions that the political regime was safeguarding the *Volk* by catering to its needs rather than to the demands set by an intellectual elite. Alignment with the common folk as opposed to intellectuals who discussed issues irrelevant to the immediate racial crisis tied in well with the *Führerprinzip*. Alongside his image as a prophetic genius sent from God, Hitler also was depicted as someone who rose from and maintained ties with everyday people.[32] Hitler's conquest of his lowly origins and poverty allowed him to appreciate the toils of everyday life, and he exploited this theme as a way to emphasize his solidarity with the German *Volk*. His preference for action over deliberation led Hitler to assert that "in time of crisis one single energetic man of action outweighs ten feeble intellectuals."[33] Increasing the distance between political action and intellectual deliberation also united Hitler with those who placed little faith in research that did not contribute tangibly to solving the nation's most urgent problems.

Power Versus Knowledge

Implementation and investigation become more distant the more rigidly distinctions are drawn between power and knowledge. The work of Jürgen Habermas provides an overview of the conceptual system that is built on this way of treating theory and practice.

In his later work, Habermas attempts a reconciliation of theory and practice via the concept of practical discourse, which represents formal argumentative conditions necessary "to reach a consensual means of regulating some controversial social matter."[34] Practical discourse involves stipulation of discursive conditions designed to prevent or weed out any agents of power besides the force of the better arguments. Habermas adds that the discursive conditions, which may be understood as moral imperatives mutually binding on all interlocutors, should be directed toward practical questions amenable to rationally generated consensus. The very unity

Habermas proposes between taking and weighing perspectives, orientation toward action, and morality seems to render practical discourse an umbrella concept without sufficient means for containing the forces that drive implementers and investigators to assume conflicting roles.[35] The proposed solution is to subsume the sources of conflict, the tensions and oppositions discussed by Plato, Aristotle, and Mannheim, under the types of consensually recognizable and binding moral "givens" already present--albeit perhaps latently--in the shared lifeworld underlying any communicative action.[36]

Habermas suggests that practical discourse based on ethical commitments integrate theory and practice by using reason to overcome historicized interests that might not be in the interests of all interlocutors. By claiming a victory of reason over power, where communicative reason acts as an "avenging force" against deception by means of power, Habermas still polarizes knowledge and power.[37] Practical discourse, like the theory of communicative action as a whole, maintains the opposition between strategic action functioning through exerting influence [*Übersetzen*, persuasion via complementarity of competing interests], treated in the current investigation as indoctrination, and communication as a means to mutual understanding [*Verstehen*, cooperative harmonization of interests], discussed herein as enlightenment.[38] Habermas senses the need for reviving the rational basis for achieving consensus because he configures indoctrination and illumination as fundamentally different methods of inducing action or belief. By ruling out conditions that facilitate indoctrination, Habermas places communicative action involving practical discourse in a position that filters out all factors that escape rational analysis and critique. In effect, Habermas creates his own version of the asymptotic divergence of power and knowledge.

Toward Relationships of Convergence

The relationship between those who engage in intellectual endeavors and those who engage in practical affairs sometimes becomes articulated as a tension attendant to overlapping roles instead of outright opposition. Karl Mannheim, at the outset of *Ideology and Utopia*, sets up the potential for conflict. He contrasts the self-absorbed intellectual activity of philosophers who write the histories of their own "quite special fields of knowledge" with the endeavors of "acting men," or "living human beings who are seeking to comprehend and to mould their world."[39] The "living human being" Mannheim envisages occupies a more privileged position that either the armchair thinker or the unreflective activist. Note that immersion in life includes both thought (comprehension) and concrete endeavors (moulding).

Mannheim suggests that a convergence of the roles of investigator and implementer would open a path that avoids the pitfalls associated with "historical immediacy" on one hand and "abstract schematization" on the other.[40] In passages reminiscent of Plato's outline for a politically astute and intellectually acute philosopher-king, Mannheim sketches how political exigencies could be met by someone who is oriented toward action but can transcend the pressures of the moment to understand the historical and intellectual configurations that generated a particular event.

Implementers and investigators sometimes denied that science had become a tool of Nazi politics. Instead, they wanted to portray science and National Socialism as converging toward a uniform approach to "burning problems" plaguing the nation.[41] The claim that science was conditioned by the blood of researchers did not make science into a handmaiden of politics. Instead, it showed that German scientific research and Nazi policy initiatives could find common roots in their emanation from the qualities inherent in the bloodline.[42]

The potential reconciliation of implementation with investigation raises a question that invites a rhetorically informed response, since it concerns the means of persuasion: "Can interests be aroused only by means of indoctrination?"[43] Might action be taken that is informed by critical awareness without sacrificing its relevance? These questions generate the scenarios of convergence, which merit consideration after the circumstances calling for convergence receive attention.

Conditions Fostering Convergence

When might the aims, methods, assumptions, or effects of implementation and investigation converge? Several conditions contribute to convergence of these personae, and convergence sometimes becomes manifest as a unity that makes enlightenment and indoctrination indistinguishable. Perhaps the best example of this apparent unity was the title of the ministry directed by Josef Goebbels: the Reich Ministry for Public Enlightenment and Propaganda [*Reichsministerium für Volksaufklärung und Propaganda*]. The remainder of this section introduces conditions that encourage the convergence or unity of investigators and implementers: erosion of the boundaries between power and knowledge, and the employment of cognitive operations where the processes of discovery, explanation, and interpretation intersect.

Erosion of the Boundaries Between Power and Knowledge

The work of Michel Foucault focuses on a condition that blurs the separation between exerting influence and pursuing knowledge. Instead of treating knowledge acquisition and compliance gaining as different in kind, Foucault seeks to deconstruct the barriers philosophers such as Plato and Aristotle built to divide knowledge and political action. For Foucault, statements that purport to be scientific facts often have another function: to regulate social

behavior. In their normative role, scientific or scientifically authorized pronouncements play a role in governing what may be sanctioned in epistemological terms as a logically grounded social order. The "politics of the scientific statement," therefore, does not involve an investigation of how science may be co-opted by the intrusion of politics, but rather how the employment of scientific language itself mirrors and shapes power relationships in a political regime.[44] Far from falling from its apolitical state of grace, science remains politicized insofar it serves to justify or reinforce social hierarchies. Precisely this political nature of science lay at the root of how racial hierarchies were constructed and supported scientifically.[45]

The convergence of power and knowledge discussed by Foucault historicizes claims or institutions presented and defended as epistemic, treating the appropriation of knowledge itself as, a historically conditioned means of exercising influence. This tendency to deny knowledge that transcends historically particular interests causes Habermas to label Foucault's approach "a presentist historiography" because it is unable to transcend historical and social immediacy to reflect on its own "normative foundations."[46] In a sense Habermas is correct, because Foucault retains the suspicion that knowledge claims propounded as historically transcendent could be employing assertions of transcendency to advance a particular interest. Unlike Habermas, Foucault does not consider this particularization problematic unless it is couched in universalistic terms. Foucault, however, clearly calls attention to how scientifically authorized knowledge claims can operate normatively because of their inherent politicization.

Intersection of Discovery, Explanation, and Interpretation

Another set of conditions in which implementation and investigation could converge has received little attention, but it has been outlined by Vico. In his discussion of "poetic wisdom," Vico explains how the creative use of language in *poeisis* shows the way that practice itself can

yield knowledge.[47]   Vico might not have had the reconciliation of epistemics and practice in mind, but his work points toward what the intellectual and social climate might be that would foster such a rapprochement.

According to Vico, human epistemic endeavors have their historical roots in the way language originally was employed.   Instead of attributing historical primacy and utmost epistemological status on the use of language in its capacity of reporting, Vico contends that the descriptive aspect of language developed after its poetic employment.[48]   By the poetic use of language, Vico refers to the creative act of *poeisis*, the human construction of language to invest reality with attributes that render it understandable in human terms.[49]   For example, natural phenomena were explained first as the acts of divine forces personified in nature, with inanimate objects anthropomorphized to assume the role of agents of change. Only much later did humans distance themselves from natural phenomena and act as observers of nature rather than as creators who invested natural objects or divine beings with anthropomorphic qualities.[50]

While much of Vico's historical analysis weaves a narrative to support his interpretations and does not qualify as factually accurate, his comments assume great importance concerning the convergence of implementation and investigation. Vico's theory of poetic wisdom suggests that all language and indeed all quests for knowledge share a mythopoetic origin in their development from the basic human tendency to extend human motives and characteristics to the world around them. Only much later would they see themselves as objects of forces operating upon humanity. This conception requires formulation of "the rational or philosophic universals" that presume an ability and desire to objectify humanity per se and natural phenomena per se as entities and forces capable of relationships as agent and patient.[51]

Vico's theory of poetic wisdom indicates that the understanding of science as a description of reality may be a way of conceiving how science functions rather than a trait of science itself. If science serves to explain not only via descriptions that mirror reality but by creatively molding how reality might be interpreted, then science and politics operate in a shared rhetorical realm. The roles of implementer and investigator historically have been separated by the distinction between intellection and action or knowledge and appearance. Vico calls attention to why this separation may not always be justified. Both implementers and investigators may evoke a reality through language, and part of this evocation may involve the claim that the reality always existed but had awaited accurate description until a particular political regime or scientific theory.

Precisely this evocative quality appeared in discourse concerning racial science. Legislative acts or proclamations achieved the force of performatives not only in the purely linguistic sense that terms such as 'act' or the like do enact something.[52] Far more important, the discourse of implementers and investigators shared a common role in constructing a narrative of past history and future destiny that rendered vigorous action to protect racial quality imperative. The use of the copula may serve as an illustration. Investigators preferred using the indicative mood, avoiding the subjunctive mood or conditional tenses that would call attention to scientific theories as human interpretations. The linguistic force of the copula in the indicative reinforces the perception that racial science functioned as a relayer of truth, contrasting with the speculative possibilities entertained by allegedly Jewish-influenced science. While speculative intellectual endeavors began with hypothetical or counterfactual conditions and assumptions, e.g. "Imagine that a body travels at a velocity approaching the speed of light," racial science was grounded in what investigators claimed was observable or historical reality. Martin Staemmler, for example,

treated race as easily definable because everyone could observe how plants and animals of the same kind naturally occurred together and gravitated toward like types to breed.[53]

The conditions fostering convergence of implementation and investigation might seem to outweigh the conditions favoring their divergence. While the forces favoring divergence stem from categorizations arising from conceptual schemes in Platonic and Aristotelian philosophy, the impetus toward convergence appear to have stronger grounding in the nature of language itself. This conclusion, however, would prove hasty and unwarranted. Far from recommending the conflation of theory and practice in the merger of implementation with investigation, the current study should warn against an unqualified allegiance with either convergence or divergence. The total conflation of implementation with investigation overlooks the ability of each persona to play (maintaining the dramatic metaphor) a role as foil to the other. A purely pragmatic outlook attendant to implementation or a purely intellectual orientation accompanying investigation does oversimplify the situation. There remain, however, ways for implementation and investigation to prevent each other from becoming blind to considerations that escape the purview of their particular roles. Indeed, if theory and practice do not reduce to a single process or entity, then their relationship must amount to more than synonymy. Their interaction should encourage not only mutual checks on purported authority but seek to "achieve a symbiotic relationship" of intellectually enlightened political practice and practically useful scientific endeavors.[54]

Relationships of Checks and Balances

Investigators and implementers historically and theoretically have acted sometimes as checks on each other. Julien Benda claims that the status of intellectuals and the quality of

political decision-making has declined as researchers have abandoned their penchant for trenchant critique and succumbed to the lure of political patronage.[55] The synthesis of implementation and investigation lies in reconciliation of political with intellectual roles and functions. Some distinction between these roles seems necessary to preserve the accountability lost by assuming the interests of the nation or the interests of researchers speak for the interests of everyone.

One way to conceive of the relationships between implementers and investigators is to understand the roles not so much as equals as maintaining a parity where they establish a balance with neither role usurping the other. Science always performs some social role, but this ideological component is observable less in overt political statements than in two contradictory tendencies that emerge when illumination and indoctrination blend. First, science espouses a rigorously critical examination of all evidence and claims, yet its own agenda remains uncriticized or unexamined. Second, although scientists investigate relationships among objects or phenomena, the relationships between science and its social environment are rarely subjected to scrutiny by the investigators themselves.[56] These contradictions might seem indigenous to science, but they reveal a broader problem: they are symptomatic of the breakdown of checks and balances between implementers and investigators.

Conclusion

The objective of this discussion resembles the task Mannheim sets for the sociology of knowledge: "to obtain systematic comprehension of the relationship between social existence and thought."[57] While the sociologist of knowledge might rest content with a relational map, the current project seeks to offer some insight regarding how the logically possible relationships between theory and practice have become materialized in the discourse concerning racial science.

Shifting relational scenarios should help restore some fluidity to the discursively negotiated territories characterized as pursuit of knowledge and pursuit of compliance. The claim made by scientists that Nazism marked "the intrusion of politics into scientific matters" assumes both a mandarin-like detachment of science from political concerns and an underestimation of h. w science and politics might be related in ways other than domination.[58] Far from a simple unity or antithesis, investigation and implementation interact dynamically just as interpersonal relationships evolve and adapt according to the circumstances and participants.

The reconciliation of implementers and investigators suggests how knowledge and power may be understood as patterns of communicative relationships more than in terms of the qualifications or titles held by individuals. Alvin Toffler's recent work points toward redefining workplace activities as directions of what he calls "knowledge processing," which involves tracking the flow of knowledge claims within and among organizations.[59] Toffler suggests that the "new hero" emerging in today's business environment is "the innovator . . . who combines imaginative knowledge with action."[60] Phrased in the terminology employed here, the most important task in the professional world—which includes political and academic realms—may be to reconcile and integrate the roles of implementer and investigator.

Notes

[1] Alan Beyerchen, "What We Now Know About Science and Nazism," *Social Research* 59 (Fall 1992): 621.

[2] On expendiency as the central concern of political activity, see *Rhetorica* 1358b.21-25; *Politica*, rev. ed., trans. Benjamin Jowett, *The Works of Aristotle Translated into English*, ed. W. D. Ross, vol. 10 (Oxford: Clarendon, 1921) 1253a.10-14.

[3] John Ziman, *Public Knowledge: An Essay Concerning the Social Dimension of Science* (Cambridge: Cambridge UP, 1968) 15-23.

[4] Ch. Perelman and L. Olbrechts-Tyteca, *The New Rhetoric: A Treatise on Argumentation*, trans. John Wilkinson and Purcell Weaver (Notre Dame, IN: U of Notre Dame P, 1969) 33.

[5] *Politica* 1252a.18-24; *Nicomachean Ethics*, trans. and intro. Martin Ostwald (Indianapolis: Bobbs-Merrill, 1962) 1139b.20-24.

[6] Howard Morley Sachar, *The Course of Modern Jewish History*, updated and expanded ed. (New York: Delta, 1977) 431.

[7] K. Holler, "The Nordic Movement in Germany," *Eugenical News* 17 (Nov.-Dec. 1932): 119. The lack of resistance among intellectuals might represent a failure of Perelman's concept of the universal audience as a monitor of argumentative quality. If the "best and brightest" audience succumbed to Nazism, what hope remained for any particular audience?

[8] John Lyne and Henry F. Howe, "'Punctuated Equilibria': Rhetorical Dynamics of a Scientific Controversy," *Quarterly Journal of Speech* 72 (1986): 133-142. The quoted terminology appears in "'Punctuated Equilibria'" 138, 140.

[9] This distinction is made by Thomas B. Farrell, "Knowledge, Consensus, and Rhetorical Theory," *Quarterly Journal of Speech* 62 (1976): 1-14. A criticism of the distinction appears in Walter M. Carleton, "What Is Rhetorical Knowledge? A Response to Farrell—and More," *Quarterly Journal of Speech* 64 (1978): 313-328.

[10] For consensus as a goal of science, see Ziman 116, 135n, 146-147.

[11] John Dewey, *The Public and Its Problems* (1927; Chicago: Swallow, 1954) 110-142.

[12] Ludwig Wittgenstein, *On Certainty*, ed. G. E. M. Anscombe and G. H. von Wright, trans. Denis Paul and G. E. M. Anscombe (New York: Harper, 1969) §§ 3, 82, 115.

[13] *Philosophical Remarks*, ed. Rush Rhees, trans. Raymond Hargreaves and Roger White (Chicago: U of Chicago P, 1975) § 27.

[14] Francis Bacon, *The New Organon, The New Organon and Related Writings*, ed. and intro. Fulton H. Anderson (Indianapolis: Bobbs-Merrill, 1960) I.lxx.

[15] Albert E. Moyer, *A Scientist's Voice in American Culture: Simon Newcomb and the Rhetoric of Scientific Method* (Berkeley: U of California P, 1992) 4-5.

[16] Josef Goebbels, "Rassenfrage und Weltpropaganda," *Völkischer Beobachter* 5 Sept. 1933: n. pag.

[17] Ernst Krieck, "Die Objectivität der Wissenschaft als Problem," *Das nationalsozialistische Deutschland und die Wissenschaft* (Hamburg: Hanseatische, 1936) 26, 27.

[18] Krieck 28.

[19] Krieck 31.

[20] Krieck 32.

[21] Alfred Rosenberg, *Der Kampf um die Freiheit der Forschung*, Schriften der Hallischen Wissenschaftlichen Gesellschaft, hrsg. Johannes Weidemann, Band 1 (Halle/Salle: Max Niemeyer, 1939) 11.

[22] Rosenberg 13.

[23] Krieck 32.

[24] Krieck 32.

[25] Bertrand Russell, *Human Knowledge: Its Scope and Its Limits* (New York: Simon and Schuster, 1948) 3.

[26] Krieck 33.

[27] *Liste des schädlichen und unerwünschten Schrifttums.* Leipzig: Ernst Hedrich, [1939] n. pag.

[28] All quotations are from *Liste des schädlichen und unerwünschten Schrifttums* n. pag.

[29] W. I. B. Beveridge, *The Art of Scientific Investigation*, 3rd ed. (New York: Vintage, 1957) 169.

[30] Bernhard Rust, "Nationalsozialismus und Wissenschaft," *Das nationalsozialistische Deutschland und die Wissenschaft* (Hamburg: Hanseatische Verlagsanstalt, 1936) 21-22.

[31] Rust 19-20.

[32] Ian Kershaw, "The Führer Image and Political Integration: The Popular Conception of Hitler in Bavaria During the Third Reich," Der "Führerstaat": Mythos und Realität, hrsg. Gerhard Hirschfeld und Lothar Kettenacker, einl. Wolfgang J. Mommsen (Stuttgart: Klett-Cotta, 1981) 139.

[33] Adolf Hitler, My New Order, ed. Raoul de Roussy de Sales, intro. Raymond Graham Swing (New York: Reynal and Hitchcock, 1941) 566.

[34] Jürgen Habermas, Moral Consciousness and Communicative Action, trans. Christian Lenhardt and Shierry Weber Nicholsen, intro. Thomas McCarthy (Cambridge, MA: MIT, 1990) 103. The concept of practical discourse had emerged in a nascent form as a way to resolve the problematic relationship between theory and practice. See Habermas, Theory and Practice, trans. John Viertel (Boston: Beacon, 1973) 38-39.

[35] Cf. Habermas, Moral Consciousness and Communicative Action 122, 131.

[36] Habermas acknowledges these objections in Moral Consciousness and Communicative Action 105-106. For the sources of consensus arising from a shared lifeworld [Lebenswelt], see Habermas, The Philosophical Discourse of Modernity, trans. Frederick Lawrence (Cambridge, MA: MIT, 1987) 298.

[37] The quote is from Habermas, "A Reply to my Critics," Habermas: Critical Debates, ed. John B. Thompson and David Held (Cambridge, MA: MIT, 1982) 227. Cf. Habermas, Moral Consciousness and Communicative Action 106. The differences are schematized as mutual exclusivity in "A Reply to my Critics" 264.

[38] For examples of the oppositional relationship, see Habermas, "A Reply to my Critics" 234, 237, 266-267.

[39] Karl Mannheim, Ideology and Utopia (New York: Harvest, 1936) 1.

[40] Mannheim 175.

[41] Gerhard Krüger, Wo steht die Wissenschaft? Schriften der Bewegung, Heft 6, hrsg. Philipp Bouhler (München: Zentralverlag der NSDAP, 1937) 9.

[42] Krüger 8.

[43] Mannheim 183.

[44] Michel Foucault, Power/Knowledge, ed. Colin Gordon, trans. Colin Gordon et al. (New York: Pantheon, 1980) 112.

[45] Foucault makes the same point, referring to this discussion in The Order of Things: An Archaeology of the Human Sciences (New York: Vintage, 1973) 113.

[46] Habermas, *The Philosophical Discourse of Modernity* 294.

[47] Giambattista Vico, *The New Science of Giambattista Vico*, 3rd ed., trans. Thomas Goddard Bergin and Max Harold Fisch (Ithaca, NY: Cornell UP, 1948) Book II.

[48] Vico I.375, I.384.

[49] Vico II.401.

[50] For the process and primacy of these figurative techniques, see Vico II.404-405, II.500-501.

[51] Vico II.460.

[52] For this performative function that transcends verbs, see J. L. Austin, *How to Do Things With Words*, 2nd ed., ed. J. O. Urmson and Marina Sbisà (Cambridge, MA: Harvard UP, 1975) 75.

[53] Martin Staemmler, *Rassenpflege im völkischen Staat* (München: J. F. Lehmann, 1933) 13.

[54] Davenport 153.

[55] Benda 44-45, 139.

[56] Max Horkheimer, *Selected Essays*, trans. Matthew J. O'Connell et al. (New York: Herder and Herder, 1972) 8.

[57] Mannheim 309.

[58] Beveridge 151.

[59] Alvin Toffler, *Powershift: Knowledge, Wealth, and Violence at the Edge of the 21st Century* (New York: Bantam, 1990) 157-158.

[60] Toffler 239.