From Combine to Concentration Camp: IG Farben, Efficiency, and the Early Frankfurt School

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ABSTRACT

Histories of the Auschwitz concentration camp often presuppose that the Nazi technological processes of annihilation were derived from the tenets of racial purity and Nordic Romanticism (Katz 2008). The history of IG Monowitz, the sub-concentration camp financed, constructed and staffed by IG Farben, provides a counterargument to the idea that ideology was the impetus behind technical process. Rather, IG Monowitz and its adoption of the barbaric techniques of the Nazi SS arose in response to the crises of labor and the acute shortage of materials caused by the intensifying war effort. Utilizing the work on subjective rationality and technological rationality of the early Frankfurt School, specifically Max Horkheimer, T. W. Adorno and Herbert Marcuse, it will be demonstrated that the Nazi technological processes were appropriated at IG Monowitz not out of ideological alignment, but out of the need to reduce the gap between means and ends, to simplify and unify the productive process and to ensure "radical coordination" (Marcuse 1995:44).

INTRODUCTION

> *The rivalry came to a head one day in August 1942, when Eichmann's deputy, Günther, and the chief disinfection officer, Kurt Gerstein, arrived in Belzec. They had about 200 pounds of Zyklon with them and were about to convert the carbon monoxide chambers to the hydrogen cyanide method. The unwelcome guests stayed to watch a gassing which took an especially long time (over three hours) because the diesel engine had failed. To Wirth's great embarrassment and mortification, Gerstein timed the operation with a stopwatch*
>
> (Hilberg 1978:572)

Raul Hilberg's depiction of an inspection of the gas chambers at the Belzec concentration camp illustrates the inextricability of genocidal processes and the drive toward efficiency. Historians and philosophers of science assert that concentration camp technical processes, like those implemented at Auschwitz, were enabled by the cultural and moral posture of National Socialist society and its consequent social organization (Katz 2006). This argumentation presupposes that concentration camp technologies and processes were used exclusively by Nazis, and remained limited to its ideologically driven application. However, IG Monowitz, the sub-concentration camp owned and operated by IG Farben, adopted the same brutal technologies and processes but for the rational considerations of production and efficiency. Thus, IG Monowitz represents a counter-argument to the hypothesis of "Nazi Technology" (Katz 2006:303).

The conditions which precipitated the creation of IG Monowitz will be referred to as the problem of labor/the problem of "immediate output" (Hayes 1987:356) and the problem of growth/the problem of "ultimate competitiveness" (Hayes 1987:356). These two conditions jeopardized the productivity of the combine; its potential to contribute to the German war effort; and its ability to remain profitable. While these conditions drive the narrative of IG Monowitz, they do not explain the momentum, the determination, and the myopia of the combine's path to IG Monowitz. That explanation will be found in the early thought of the Frankfurt School, specifically the work of Max Horkheimer, T.W. Adorno, and Herbert Marcuse. Using the early Frankfurt School's work on efficiency, technological rationality, and the ethos of mass production, it will be demonstrated the measures taken to guarantee self-preservation through the maximization of efficiency solidifies a system of thought and being that is markedly uncritical and instrumentalized.

Methods

The methods used in this paper are primarily historical content analysis. The historical research is based upon secondary resources concerning Auschwitz and IG Farben. Hilberg's, *The Destruction of the European Jews* and Hayes', *Industry and Ideology: IG Farben in the Nazi Era* have proven especially valuable. The analysis of the writings of the early Frankfurt School is largely based on primary texts, as well as supplemental texts such as Jay's, *The Dialectical Imagination: A history of the Frankfurt School and the Institute of Social Research 1923-1950*, and Wiggershaus', *The Frankfurt School: Its Histories, Theories, and Political Significance*.

The paper is organized in three sections. Section one consists of an analysis and explication of subjective reason. The discussion will begin with Horkheimer's and Adorno's work on the emergence of the subject and object through the introduction of

logical thought as discussed in the *Dialectic of Enlightenment*. Their concept of subjective reason will be further articulated using Horkheimer's *Eclipse of Reason*, published in 1947. Technological rationality and efficiency, as hypothesized by Marcuse, will then be explored using his essay published in 1941, "Some Social Implications of Modern Technology", and his seminal work on the "advanced in industrial age" (Marcuse 1964), *One-Dimensional Man*.

Following the section on the early Frankfurt School, there will be a history of IG Monowitz, approached from three different explanatory perspectives: the problem of labor/the problem of "immediate output"; the problem of growth/the problem of "ultimate competitiveness" (Hayes 1987: 356); and lastly, IG Monowitz as the convergence of the two. The historical chronicling of IG Monowitz will begin with a brief introduction to the history of its parent corporation, IG Farben.

The concluding section of the paper directly applies the theory of the early Frankfurt School to the history of IG Monowitz. This discussion will be framed within a critique of Katz' hypotheses of "Nazi technology". By exposing the limits of Katz' hypothesis, the development of IG Monowitz can be understood as a reification of the drive toward efficiency. Furthermore, IG Monowitz, through the analytical lens of the Frankfurt School, can be seen as an outgrowth of IG Farben's self-interest, which was an effort to guarantee the self-preservation and autonomy of the combine. In short, the concluding section of the paper will depict IG Monowitz as an ideal embodiment of the uncritical, yet reasonable thought found within technological rationality.

THE EARLY FRANKFURT SCHOOL: SUBJECTIVE REASON AND THE DREAM OF "RADICAL COORDINATION"

Introduction

The Institute for Social Research was founded at the University of Frankfurt during the 1920's. As the Nazi regime assumed power, the Frankfurt School made preparations to flee the Reich and reestablish itself in the United States. In the summer of 1934, Columbia University extended an invitation to the Institute to affiliate with the university, thus forming the, "Institute for Social Research" (Kellner 1998). The early Frankfurt school, meaning the work of Max Horkheimer, T.W. Adorno, and Herbert Marcuse[1], was a direct reaction to the Holocaust and Nazi conquest from which they fled (Jay 1973). The work of the Frankfurt school from the early 1930's onward was an intellectual battle cry, endeavoring to "explain why humanity instead of coming to a truly human state, is sinking into a new kind of barbarism" (Horkheimer and Adorno 1987:xiv).

Subjective Reason: The Betrayal of Thought

"*Especially the [type of reason] which disturbs me most of all: the form of reason which suddenly changes into complete manipulation and domination still nevertheless remains a form of reason, so that the real horror of the system lies more in its rationality than in its irrationality*"[2]
(Wiggershaus 1986:350)

The discussion of subjective reason[3] begins at the intellectual and epistemological turning point of the Enlightenment. The Enlightenment signaled the inception of the apotheosis of logic and the beginning of positivism; logic was to be simultaneously the wedge and the bridge between individuals and the natural world. In this sense, "[f]ormal logic was the high school of unification" (Horkheimer and Adorno 1987:4). It shattered

[1] When speaking of the early Frankfurt School, and especially the early work of Herbert Marcuse, one must not neglect the work of Franz Neumann, especially with regard to seminal work on National Socialism, Behemoth. For the purposes of this paper, however, his contribution is not relevant, and will be omitted.

[2] This fragment originally appeared in a letter from Herbert Marcuse to Max Horkheimer.

[3] "Reason", in its general application, within philosophical discourse assumes numerous forms. The general form of reason addressed in this paper is that which is defined by Horkheimer. Reason related to individuals' "faculty of thinking" (Horkheimer 1947: 6), however, it was not deterministic. It was intended to "regulate our preferences and our relations with other human beings and with nature" (Horkheimer 1947: 9). It comprised the "spiritual power living in each man…the creative force behind the ideas and things to which we should devote our lives" (Horkheimer 1947: 9).

individuals' estrangement from his world of being, operationalizing his reality, "making the world calculable" (Horkheimer and Adorno 1987:4). The merging of individuals and nature afforded by logical thought, however; signaled a new delineation between individuals and nature built from the comfortable certainty derived from logical practice. Individuals stood above nature, stripping it of its immanence, subsuming it in a complex of refractions of natural and logical law (Horkheimer and Adorno 1987). As the individual became the cartographer of his or her own existence, he or she became the subject; he or she became the divine reification of science. Horkheimer and Adorno (1987) make the point, "Man's likeness to God consists in sovereignty over existence, in the lordly gaze, in the command" (p. 6).

The appropriation of logic reconfigured man's relationship to nature (Jay 1973). As the individual was deified and had the role of subject conferred upon on him or her by his or her new scientific and logical methodology, nature became object. The classifications of objects fixed said objects between the "subject who confers meaning and the meaningless object, between rational significance and its accidental bearer" (Horkheimer and Adorno 1987:7). In other words, laws and precepts aimed at assigning explanation to the natural world, suspending it between the individual who wields the laws and the referent of natural law, nature. Because all objects are, in effect, standardized, they are interchangeable or, "fungible" (Horkheimer and Adorno 1987:7), "[a]n atom is smashed not as a representative but as a specimen of matter; and the rabbit suffering the torment of the laboratory is seen not as representative, but…as mere exemplar" (Horkheimer and Adorno 1987:7). Objects are not expressive in themselves, they are only expressive insofar that they communicate the application to which they

designate. The rabbit, represented not a fixed object, but a range of scientific outcomes with relation to certain inquiries; the smashing of an atom is not significant because of its inherent power, but because the outcome of the smashing of the atom illuminates the validity or invalidity of the inquiry itself. The birth of the relationship between subject and object and the subsequent fungibility of nature resulted in the eventual siphoning off of the transcendent meaning from nature—a leveling of meaning of all objects, an equivalence built upon standardization. Ultimately, this relationship, illustrating the tractability and domination over nature, would determine and foreshadow the barbaric relationship that the individual would assume during National Socialism (Jay 1973).

The birth of man as the subject led inevitably to the development of subjective reason and signaled the de-emphasis of objective reason. Objective reason connoted a harmonious "force" (Horkheimer 1947:4) that existed within "the individual mind" and the "objective world…between social classes…and in nature and its manifestations" (Horkheimer 1947:4). Objective reason was the pre-Enlightenment reason, like that of the Greek world. Objective reason connoted reasonable life insofar that it placed man in accord with nature—the goal of man was not subject centered, it was to be found in the space between subject and object. The goal of life lay beyond the realm of subject-centered goodness, and strove for goodness that could be found both in social life as well as the natural world.

Subjective reason, the post-Enlightenment ethic of thought, as the term implies, is grounded in the formalized thought processes of the subject. Horkheimer defines it as "the faculty of classification, inference, deduction, no matter what the specific content—the abstract function of the thinking mechanism" (Horkheimer 1947:3). This type of

abstract thinking however, is markedly uncritical—presupposing a necessary course of action to a self-evident and manifest goal (Horkheimer 1947). The course of action is deemed necessary in relation to its ability to satisfy the criteria for the subject's self-preservation. As self-preservation became technologized and bestowed a modus operandi through the appropriation of logic and calculation of thought, it became quantifiable, estimable, and tractable. The drive to preserve self became the pursuit of self-interest.

The contrast between objective reason and subjective reason is especially significant in relation to Horkheimer's (1947) discussion of "means and ends" (p. 3). Objective reason, which integrated social reality and the natural reality, concerned itself with the achievement of goodness, which was beyond the self-interest of the subject "[Objective reason] was regarded as the instrument for understanding the ends, *for determining them*" (Horkheimer 1947:10). Objective reason was inherently reflective and dialectical—it constituted a concern for the means as well as the ends: it demanded a certain disposition or act any certain time, however, objective reason also implied the "very effort and ability to reflect such an objective order" (Horkheimer 1947:11). In other words, objective reason, like subjective reason, mandated certain behaviors in pursuit of certain ends; however, objective reason was also critical of said ends, and was critical of its constitutive behaviors (Horkheimer 1947). Subjective reason, the subject-centric reason, sought the "coordination of means and ends" (Horkheimer 1947:5).

Goodness was determined insofar that the ends constituted the means. Horkheimer stated (1947):

> When 'reason' is used to connote a thing or idea rather than an act, it refers exclusively to the relation of such an object or concept to a purpose, not the object or concept of itself. It means that the thing or the idea is good for something else. (P. 6)

The crux of subjective reason presents itself clearly at this point. The value of means and ends are derived only in relation to themselves and the subject. Reason migrates inward, its purpose is solely to provide a surface for the subject to inscribe his or her self-interest, his or her own alignments of means and ends. Under the veil of subjective reason, "all our ultimate decisions are made to depend upon factors other than reason" (Horkheimer 1947:7). Reason, which, in its objective form implied object and act, encompassed oppositions and actualities. It was infinite in its immanent scope of action and criticism. Subjective rationality lacked the critical dimension of thought; instead it was buttressed by facts external to rationality, namely the corroborated and unassailable dictates of social reality (i.e.: laws of the economic marketplace, class expectations, et cetera).

As subjective reason and objective reason have become increasingly schismatic, subjective reason recedes further into social reality and objective reason into a fanciful philosophical abstraction. The flexibility of subjective reason implies the inevitable abuse and perversion of reason. This is especially the case, as objective reason has become further alien due to the shrinking of religion and the atomization of philosophy (Horkheimer 1947), thus, elevating the principle of self-interest to a governing force of reason. As Horkheimer and Marcuse both make clear, the reifications of subjective reason that are seen within the glorification of the industrial process are not sequestered in material, industrial, or scientific reality. Rather, these hypostatizations are indicative of the ductility of subjective reason, its loyalty to all, and its betrayal of thought.

"Radical Coordination": Reason and Practice

> *"Complicated logical operations are carried out without actual performance of all the intellectual acts upon which the mathematical and logical symbols are based. Such mechanization is indeed essential to the expansion of industry; but if it becomes the characteristic feature of minds, if reason itself is instrumentalized, it takes on a kind of materiality and*

> *blindness, becomes a fetish, a magic entity that is accepted rather than intellectually experienced*"
> (Horkheimer 1947:23)

The nature of means and ends, as well as the influential power of self-interest within subjective rationality, foreshadowed the development of technological rationality that would be derived from Horkheimer and Adorno's work on the Enlightenment, as well as Horkheimer's individual contribution in *Eclipse of Reason*. Marcuse was also cognizant of the potential of the development of technological rationality. He traced its technological, productive, and industrial contours, beginning with his publication of "Some Social Implications of Modern Technology" in 1941, and extending to his searing critique of advanced industrial society in *One-Dimensional Man*, first published in 1964. Both Horkheimer and Marcuse were aware of the ethic of productivity, efficiency, and technology within subjective rationality. Marcuse, however, further articulated this relationship, following his own Heideggarian intellectual origins. He examined the productive elements of society and wove them into his own unique category of rationality, called technological rationality. He demonstrated that the unrelenting productive fervor of industry resided in reason, and therefore, in the thoughts, dispositions, and inclinations of individuals.

Marcuse treated technology foremost as a "social process" (Marcuse 1998:41), and pursued technology not as scientific and industrial innovation, but as a determinate agent in the topography of social reality:

> Technology, as a mode of production, as the totality of instruments, devices and contrivances which characterize the machine age is thus at the same time a mode of organizing and perpetuation (or changing) social relationships, a manifestation of prevalent thought and behavior patterns, an instrument for control and domination
> (Marcuse 1998:41).

Marcuse's definition of technology further elaborated on the Frankfurt School's position (Kellner 1984) by distinguishing between technology, the social totality of instruments, and "technics", "the technical apparatus of industry, transportation, and communication" (Marcuse 1998:41). As Marcuse states, technology constitutes a mode of being in that it configures behavior and thought, forming its own rationality, its own pattern of reasoning and concomitant behavior. As in subjective reason, technological rationality is greatly concerned with the coordination of means and ends, the drive to this type of coordination can be understood as "radical coordination" (Marcuse 1998:44). Radical coordination is achieved through the development and practice of efficient technologies and methods. Technological rationality follows the logical sequences of mathematics and science. "[This attitude] is not only perfectly rational but perfectly reasonable" (Marcuse 1998:46). Because technological rationality is inherently reasonable and grounded in logic, efficiency is also intuitive to the productive process as efficient measures aim at clarifying and distilling the productive process. As Marcuse makes clear, efficient production is convenient. Efficiency avoids excess, it avoids potential problems, it "anticipates consequences" (1998:46) of production. Efficiency is a form of "security" (1998:46). In this light, to introduce excess and obstruction into processes by engaging in inefficient practices is not only inconvenient, but potentially compromising.

Marcuse (1998) defines efficiency as the, "integral unification and simplification, for the removal of all 'waste,' the avoidance of all detours" (p. 44). The productive process is most effective when the distance between means and ends is shortest and as streamlined as possible. It is simplified only in accordance with the "'objective order of things'", the laws of the market, demand, technology, and industry (Marcuse 1964:144).

In other words, efficient practice is deemed efficient only within the nexus of laws of which production is dependent and justified. The greater social process is superfluous at the hand of the drive to remove the distance between means and ends. Efficiency, with regard to technological rationality, is that which insulates the productive process from all that is obstructive to the process, and thus, "efficiency is a rewarded performance and consummated only in its value for the apparatus" (Marcuse 1998:45). Efficiency can only be "rewarded" by the process that it enhances, while simultaneously closing off and compartmentalizing it.

The insularity of the productive process implies an externality as well. The individual is merely a unit of production, governed by the standards and benchmarks demanded by industry and economy. The individual's inherent qualities (values, beliefs, needs, etc.) are standardized in order to make them comparable and interchangeable with others, and are evaluated accordingly (Marcuse 1998). Meeting production quotas become the individual's impetus to life. It must be noted, however, that production quotas in themselves do not constitute impulsions to a certain type of life. Rather, it is the configuration of these productive elements within the system rationality that constitutes the drive of life. Nevertheless, the individual lives for standards external to his or her own. The externality of behavior and life as a result of the insularity of productivity has a similar effect on thought and the ontological status of the individual. The demands of production redistribute truth-value, making them "good for the functioning of the apparatus—and for that alone" (Marcuse 1998:49). Truth is operationalized, distributed into binary potentialities such as true/false, yes/no, et cetera, further eliminating the critical energy of thought by making the standards by which individuals must think

external to him or herself and determined by a type of reason antithetical to a truly human state. This type of truth is "technological truth" (Marcuse 1998:50), and is the essential component of the simplification of thought within technological rationality.

Efficiency, the drive to eliminate the gap between means and ends, like technology, is a characteristic of thought and behavior inasmuch as it is a feature of the industrial rationale. Productivity, within thought and behavior, plays an obscurantist role (Marcuse 1964). It dulls thought's ability to transcend the given facts and laws. Efficiency achieved an obscurantist role within technological rationality by allowing for the productive process to magnify and facilitate the pursuit of self-interest. Self-interest "was conditioned upon the proposition that [it] was rational, that is to say that it resulted from and was constantly guided and controlled by autonomous thinking" (Marcuse 1998:42). Efficient practice in thought, which furthered satisfaction of self-interest allowed the individual to equate the satisfaction of self-interest with autonomy. Thus, efficiency in thought and behavior undergirded the individual's belief that he or she acted autonomously and was, in fact, autonomous. In turn, the achievement of efficiency became an aspiration, because in achieving efficiency, one could exercise one's autonomy, which is the essence of individuality. In other words, "[t]he scientific effort aims at eliminating waste, intensifying production and standardizing the product…And this whole scheme [seeks] to increase profitable efficiency [and thus] poses as the final fulfillment of individualism" (Marcuse 1998:49).

The net effect of the drive to efficiency within technological rationality is the destruction of opposites, alternatives and negations. Marcuse's conception of reason lies in traditional Hegelianism. Marcuse (1964) posits that, "if Reason is the common

denominator of subject and object, it is so as the synthesis of *opposites*" (p. 152). The critical potential latent in Reason stemmed from the unknowable and ineffable relations that existed between subject and object, both subject and object retained immanence and transcendence. Technological rationality and its proliferation of productive and efficient measures erected constellations of laws and quotas that are true only to a singular and myopic reason. Opposites are seen as extrinsic to procedure, as adversaries to the momentum of false autonomy. Thus, the self-evident is calcified, and idolized—the vision of society is restricted to the crest of the productive horizon; the potential energy of man and his scientific and productive capacities are those which can be plotted and analyzed within the spectrum of productivity existing between means and ends.

THE BIRTH OF IG MONOWITZ

Introduction

In the early to mid-20th century, IG Farben was the fourth largest corporation in the world (van Pelt and Dwork 1996:199). It was a conglomerate of considerable technical, political, economic influence and prowess. IG Farben controlled fifty-six plants under its own jurisdiction and that of its subsidiaries and specialized in producing industrial products such as rubber, nitrogen, gasoline, chemicals, dyes, pharmaceuticals, films and nylon (Hilberg 1978). It is important to note that following 1933, the productive focus of IG Farben began to shift toward the war economy—IG's contracts became increasingly Reich and war oriented. For example, in 1943, pharmaceuticals, fertilizers, and dyes comprised only 31% of IG's total sales, whereas other war-related goods such as metals, chemicals, fuel, and rubber, accounted for nearly 70% percent (Hayes 1987). Hayes makes the point that ten years before "the proportions were nearly reversed" (Hayes

1987:37). This statistic illustrates that as the war gathered momentum, IG Farben, like the Reich itself, was embarking on a campaign centered on the military effort. IG Auschwitz, the vast synthetic rubber, fuel, and chemical factory complex IG Farben endeavored to build, was the focal point of IG Farben's campaign in Auschwitz. The factory complex was located approximately five miles east of the Auschwitz concentration camp—IG Monowitz, which would house IG Auschwitz' labor supply, was situated on the south-eastern corner of the complex's perimeter.[4]

The relationship between the Reich and IG Farben was nearly always tenuous. The Reich coveted further domination and perpetuation of the German state[5]; IG sought the expansion of its industrial empire. These ambitions often pitted the Reich leadership against IG, but they also created occasion for alliance—namely that of productivity in the name of ideology and ideology in the name of productivity. However, this tension placed IG in a precarious position: the corporation was pinned "between the regime's priority (immediate output) and the combine's objective (ultimate competitiveness)" (Hayes 1987:356). As will be illustrated in the following section, the problem of immediate output was the constant and self-defeating quagmire of the labor shortage within the Third Reich. The problem of ultimate competitiveness became the sustained effort to control and mediate the fluctuating growth during the war. Demand for war materials as well as materials required for the Final Solution were constantly at odds with the innumerable disruptions to the flow of supplies, due to the very war effort IG facilitated.

[4] For a clear layout of IG Auschwitz, IG Monowitz, and the Auschwitz concentration camp, please the map included in appendix A.

[5] It must be noted that the treatment of the German Reich in this analysis is limited to productive methods and material concerns. In pursuing this simple analytical line concerning the Reich, the argument concerning technological rationally could be made most affectively. However, the Reich was not solely built around economic and productive drives; it too had its own system of thought. Thus, it should be emphasized that the intention of this paper is not too place the Nazi system of thought within the confines of subjective reason and technological rationality. Rather, the Reich is considered insofar that is encouraged and exaggerated IG's drive toward productivity and efficiency.

The problem of ultimate competitiveness kindled and exacerbated within IG Farben an insatiable and destructive desire to maximize output.

The administration of the combine was tortuous and diffuse. Although IG Farben's Byzantine administrative structure is of great importance to its history, it will be omitted in this analysis.[6] IG Farben was not unique in the above aspects, as Hayes (1987) points out in his comparison of IG with the American corporation, DuPont. Hayes (1987) notes that, "Three elements made IG's situation distinct during the war: the political setting, the labor shortage, and the increasing desperation of the Reich's and the firm's prospects after December 1941" (P. 332). As will be seen in the following three sections, these three factors will provide the initial momentum behind IG Farben's campaign of barbaric efficiency and irrationality.

The Problem of Labor/The Problem of Immediate Output

"*The camp labor supply was like water in a barrel with a big hole in the bottom*"
(Hilberg 1978:587)

"'*All the inmates must be fed, sheltered and treated in such a way as to exploit them to the highest possible extent, at the lowest degree of expenditure'*"
(Borkin 1978:121)

Hilberg's pithy characterization of the labor conundrum that plagued IG Farben underscores the absurd relationship between the labor shortage created by the Reich and the subsequent repercussions. The origins of the labor crisis are fairly obvious if one considers the policies instituted by the Nazis. The diminution of the labor supply occurred blow by blow. First, the Aryanization of businesses, as well as the expulsion of educated and non-educated Jewish and emigrant workers significantly reduced the labor supply. Second, conscription and the mobilization of the army removed men from the

[6] For an explanation of the administrative structure of IG Farben and its various branches, see Hilberg's, *The Destruction of the European Jews*, pages 591-594.

work force while women, were still generally speaking, encouraged to remain in the household (Hayes 1987). As the war progressed and as soldiers fell in battle, increasing numbers of workers were siphoned from the work force. Despite the labor crisis, however, IG Farben's work force peaked in 1943 at 333,000 workers (Hayes 1987:325). The crux of the problem of labor within IG Farben, and the consequent impetus to the development of IG Monowitz, does not necessarily concern the number of workers, although keeping an adequate work force was a constant issue. Rather, the threat to immediate output was embodied in the *type* of worker that remained and the decline in the efficiency of the increasingly exhausted labor population: from the skilled laborer, to the foreign laborer, and most tragically, to the concentration camp laborer.

The degeneration of the work force and the subsequent roots of IG Monowitz have their points of origination in 1941. During this period, IG struggled to recover from the loss of 18,000 laborers who left the IG factory floor for the military and other Reich oriented assignments (Hayes 1987). IG replaced their depleted work force with 12,366 foreign workers as well as 2,162 prisoners of war (Hayes 1987:342). Although IG had essentially restored the size of their labor force, productivity and efficiency began to wane resulting from unwilling, untrained, and unhealthy laborers. As a result, the Reich, which had an interest in the timely and expedient acquisition of war goods, urged IG to redeploy some of its German-born workers from the non-essential production of aspirin and film (Hayes 1987:343). This initiative clearly imperiled and undermined IG's ethic of ultimate competitiveness, and consequently, warranted action by IG officials. As a result the IG executive committee took its first step toward the creation of IG Monowitz. Because the Reich was forcibly dissolving factories in order to free German-born labor

for other productive purposes, IG Farben resorted to constructing barracks at the construction site for IG Monowitz to house more foreign laborers, prisoners of war, and concentration camp inmates (Hayes 1987). By the summer of 1942, enough barracks were constructed to house 114,076 foreign workers. In other words, as the Reich encroached upon IG's German labor supply, IG sought to compensate for its loss by housing its workers virtually on the IG Auschwitz sight. This was in attempt to soften Reich's blow to IG's productive capacity.

The barrack system was problematic because constructing and maintaining the barracks required a substantial amount of monetary and material support. The plan to pump in foreign and concentration camp labor also proved problematic. Desertion and unmotivated work continued to impair productivity. The solution was simple and the course of action ruthless: IG Farben used increasing numbers of concentration camp inmates. Between 1941 and 1944, the concentration camp inmate labor supply grew from 1,600 workers to 21,000 workers (Hayes 1987:347). It is essential to note, however, that the employment of concentration camp inmates did not at first involve concentration camp practices; this development would take place as the demands for labor/immediate output became increasingly strained. The steady accumulation of concentration camp inmates, however, ensured the construction of IG Monowitz and the deaths of thousands at the hands of IG foremen.

By the middle of 1943, IG began to sense the desperation of the war effort as well as the struggle to sustain ultimate competitiveness. IG resorted to physical discipline in order to force more productivity from their laborers (Borkin 1978; Hayes 1987). As the proportion of slave labor grew, so did the physical debility of the work force. Hayes notes

that, “[t]he inmates of war, many of whom arrived at the factories ill or malnourished, cost the firm two-thirds to three-quarters of the wages for comparably employed Germans but performed at about half their level” (Hayes 1987:347). It must be observed that the SS oversaw the allocation of concentration camp labor and charged IG Farben a fee for the usage of their inmates. Consequently, despite the abundance of slave labor, IG Farben barely profited due to the combination of the inefficiency of the slave labor force and the fee incurred from the rental of Auschwitz inmates from the SS. Despite providing housing for their slave labor force, IG did not have jurisdiction over their concentration camp laborers. The solution was clear: the combine needed its own concentration camp.

The IG concentration camp, IG Monowitz, was further necessitated by the logistical complications and subsequent inefficiencies caused by the combine’s physical distance from its labor supply. Borkin states that, “The labor details were marched more than four miles from the main Auschwitz camp to the IG construction site through the extreme summer heat and winter cold” (Borkin 1978:120). This meant that the laborers from the camp were exhausted upon their arrival at the buna (synthetic rubber) plant or gasoline factory, and frequently, some perished during the grueling marches. The geography of the Auschwitz camp also posed a logistical impediment. Auschwitz was built upon flat, malarial swampland (Hilberg 1978). The marshy camp routinely produced intense fog in the mornings, often delaying the early morning march and curtailing the productive workday. Furthermore, the labor crisis in the Reich thinned the population of guards on staff at concentration camps. In 1944, there were roughly 3,000 guards for a prisoner of population of roughly 67,000 meaning that there were nearly twenty-two inmates per guard (Hilberg 1978). This shortage of guards meant that a limited number of

concentration camp laborers could be brought from Auschwitz proper to IG Auschwitz. Moreover, these guards were responsible for surveillance and discipline of the inmates within the plants during the workday. Thus it became imperative for IG foremen to assume the role of the SS guard—if the foreman could discipline as the SS could, this would increase productivity and compensate for the dearth of guards and the constriction of the labor population. At last, the occasion had arisen in which the industrial foreman became the prison guard, the enforcer of work through violence and intimidation. IG Monowitz' appropriation of the strategies of Auschwitz was so complete, that not only the strategies were appropriated, but also the imagery. Over IG Monowitz' entrance, hung the same sign that hung over the Auschwitz concentration camp gate: "Arbeit Macht Frei" ("Work makes you free") (Borkin 1978:126).

IG Farben's approach to labor policy had shifted toward barbarism. As the problem of labor as well as the threat to immediate output became increasingly apparent, the violent tactics of IG Farben grew. In the winter of 1943, IG Farben reached an impasse, their given labor population was simply too problematic, too close to death. As a result, in conjunction with the SS, the first "'selection'" of workers to be sent to the gas chambers was made by IG personnel and carried out by SS officials. Approximately 1,750 were sent to death (Hayes 1987). The adoption of the selection technique reflected the conclusion that the individual inmate was completely expendable. Moreover, the selections signified the reality within IG Monowitz that the life cycle of the laborer existed along a sole trajectory, work until death (Hayes 1987).

The Problem of Growth/ The problem of Ultimate Competitiveness:

> *"Significantly, the IG's involvement in Auschwitz can be traced not to a desire to kill Jews or to work them to death but to a complicated manufacturing problem: the expansion of synthetic rubber ('Buna') production"*

(Hilberg 1978:592)

The history surrounding IG Monowitz is inextricable from the Reich labor shortage and furthermore its goal of global conquest. The history of IG Monowitz, however, also occupies an alternate historical plane. It must be emphasized that as an international conglomerate, IG was constantly vying for the productive advantage in relation to other major corporations such as Standard Oil and DuPont of the United States, as mentioned earlier (Hayes 1987). As Hilberg's quotation at the beginning of the section suggests, it was not the opportunity to join the SS in genocidal practice that brought IG to Auschwitz, but rather the occasion for industrial growth via Auschwitz' natural resources and its proximity to major railroad lines (Hilberg 1978). IG scientists noted that Upper Silesia, the area of Poland in which Auschwitz was located, had sizeable coal deposits. Coal was integral to synthetic rubber production, and thus it was advantageous to be near coal deposits. The new rubber factories at IG Auschwitz, for example, were projected to churn out an additional 25,000 tons of rubber, (Hilberg 1978:592). IG Farben scientists and executives had tremendous hope for the new location. Dr. Otto Ambros, head of the "Committee for Rubber and Plastics" (van Pelt and Dwork 1996:197) at IG Farben, lauded Upper Silesia and the subsequent factories that would be built there, promulgating their potential as a locus of industrial science. Ambros proclaimed, in a speech in 1941, that out of Upper Silesia and IG's future factories there

> "'must grow new branches of organic chemistry; as for instance, plastics, resins, lacquer binding media, textile auxiliaries, et cetera. The latent possibilities of this branch of chemistry provide the stimulus for the development of a subsidiary industry in Upper Silesia, which will deal with the processing of these basic raw materials into finished articles'" (van Pelt and Dwork 1996:209).

The resources and opportunities afforded by Upper Silesia allayed, at least temporarily, the anxiety of the corporate behemoth, but competitiveness was continuously undercut and made frenzied by the shortage of non-slave labor, interruptions to supplies, surges in demand, fierce competition among IG's competitor's abroad, and the huge investment required.

By 1942, Russia was challenging Germany's eastern front and in the west, the US had entered the war. The escalating military situation energized production efforts and provided an opportunity for IG to tighten its industrial grip upon its various components. IG frenetically began to assemble resources and manpower for its hulking twenty square kilometer IG Auschwitz industrial zone, which was to include "units for methanol, iso-octane, carbide, and other chemicals, as well as buna" (Hayes 1987:351).

Between May and June of 1942, all railroad activity except military transport was halted, causing tremendous material shortages and a delay in the construction of IG Auschwitz. (Hayes 1987). The temporary bans on the rail transportation of all non-military goods was typical during the mid-1940s, impairing IG's productivity and posing a perceptible threat to IG's stature as a global industrial leader, especially in the rubber industry. In contrast, in the US, industrial producers, such as Standard Oil (Hayes 1987), experienced the same feverish demand but experienced few domestic delays of supplies. Consequently, by 1944 US rubber producers had produced 450% more than "Germany's maximum production target" (Hayes 1987:355).

IG knew that its future depended on the completion of the IG Auschwitz factories and the efficient production of synthetic rubber and other war goods that these new cutting-edge factories could provide. Hayes states (1987):

> "the tension between the needs for haste and quality work, were gradually rubbed raw by repeated interruptions of supplies. What followed was a steady barbarization at IG-Auschwitz, as the increasingly illogical buna plant partook more and more of the brutal madness that ruled its setting" (P. 356).

IG Auschwitz signified the possibility of incredible profit, however the possibility of loss for IG was equal in proportion, and looming. By war's end, IG had invested over 700,000,000 reichsmark into the new industrial complex (Hilberg 1978:594); or, expressed differently, 23% of IG's total assets in 1944 (Hayes 1987:325). IG management saw the establishment of their own concentration camp, IG Monowitz, as a desperate and inexpensive way to complete the IG Auschwitz project, as well as secure the financial salience of the corporation in the least expensive manner. The inconsistency in delivery of supplies for construction, vigorous industrial competition, and the pressures posed by the immense investment by IG into IG Auschwitz necessitated the establishment of IG Monowitz. A surge of productivity was needed that would supply the additional industrial energy needed to guarantee the long-term well being of the combine, and ensure future growth and competitiveness. Excess had to be shaved from the industrial endeavor and the entire manufacturing process had to be reduced to its simplest form.

IG Monowitz: the IG Farben Concentration Camp

> "*The entire camp was encircled with electrically charged barbed wire. There was a 'standing cell' in which the victim could neither stand upright, kneel, nor lie down. There was also a gallows, often with a body or two hanging from it as a grim example to the rest of the inmates"* (Borkin 1978:121)

The above quotation highlights the tragic familiarity attached to Holocaust imagery. The reading of the passage, devoid of further context, would most likely evoke an image of Treblinka, or more likely Auschwitz concentration camp. The camp described here is in

fact IG Monowitz. The above quote, however, highlights the degree to which IG achieved mimetic success in modeling IG Monowitz after Auschwitz.

Hilberg (1978) notes that "IG foremen adopted the 'SS work tempo'", meaning, for example, "the unloading of cement at a trot" (p. 595). Any action even remotely peripheral to production was grounds for discipline; activities deemed infractions by IG included, "'lazy,' 'slow to obey,' 'smoking a cigarette,' 'sitting during working hours'…[and] 'warming hands'" (Borkin 1978:125). These infractions were grounds for severe abuse at the hands of SS guards and were sometimes punishable by death. Consequently, labor became a matter of self-preservation, resulting, literally, in inmates working themselves to death. As reported during a war crimes trial of IG Farben, it was stated, "'[i]t was no rare occurrence that detachments of 400 to 500 men brought back with them in the evening 5 to 20 corpses'" (Borkin 1978:125).

The most infamous practice of the Auschwitz concentration camp adopted by IG Monowitz was "'selection'" (Borkin 1978:125). Selection involved the identification, by IG foremen, of workers who, due to infirmity were taking up the place of more able-bodied inmates. In the winter of 1943, the first selection of 3,500 inmate laborers was made—all sent to the Auschwitz *Leichenkeller* (corpse cellar) and executed (Hayes 1987:359). Between 1942 and 1944, approximately 23,000 workers were sent to death; or expressed alternatively, about 32 workers per day (Hayes 1987:359). Furthermore, the savage fervor of the work demanded and the death that ensued were themselves used as a reminder that only productivity was acceptable at IG Monowitz:

> Two or three times a week those who died on site and those from whom all useful life had been extracted were piled on open platforms for all to see and trucked to Birkenau. For the inmate laborer, it was a useful reminder employed effectively by IG foremen and SS guards. (Borkin 1978:126)

Auschwitz concentration camp was abandoned on January 19, 1945, and shortly thereafter, IG Auschwitz and IG Monowitz were closed. IG Auschwitz remained uncompleted. The promise of immediate output and growth were never realized. At the time of the SS decampment, "only a modest a stream of fuel and not a single pound of Buna rubber was ever produced" (Borkin 1978:127). IG's frantic pursuit of productivity left them less efficient with every stride toward industrial efficacy.

THE LIMITATIONS OF "NAZI TECHNOLOGY"[7], THE "REVELATION OF EFFICIENCY"[8], AND THE EARLY FRANKFURT SCHOOL

To depict the actions of Farben's managers as products [of professionalism, opportunism, and adherence to standards] is not to relieve them of responsibility. It is instead, to connect their world with ours.
(Hayes 1987:383)

In the philosopher of science, Eric Katz' essay, "Technological Evil: Cultural Values in the Holocaust", he debunks the value-neutrality of technology on the grounds that technological methods "embody a political or moral purpose" as well as "requir[ing] specific forms of social and political organization, reflective of the broader culture they inhabit" (Katz 2006:302). Katz subsequently deduces that (2006):

> technological systems were created, organized, and operated from within a specific Nazi worldview, and thus they actualized the values of Nazi culture to create a New World Order. In sum, the history of Nazi technology provides a convincing counterexample to the idea that technology is value-neutral. (P. 303)

Katz speaks of "Nazi technology" as a set of implements and processes, postured and organized in relation to the precepts of Nazi ideology. Katz' claim finds validity in the fact that Nazi technology is implemented exclusively by the destructive machine of National Socialism. The import of the history of IG Monowitz is that it emphasizes the ductility of even the most ideologically grounded productive processes and, raises the

[7] (Katz 2008: 303)
[8] (Hayes 1987:365)

question of the extent to which productive technology is reified ideology, and to what extent productive processes are situated elsewhere in alternative rationalities. Appropriating Marcuse's definition of technology, an important fact surfaces. If Nazi technology is not inherently (although these ideological concerns were, as will be discussed later, externally essential) dependent upon Nazism, "it becomes clear that something must be wrong with the rationality of the system itself" (Marcuse 1964:144-5). In other words, if the social organization of a technology cannot be found in the contortions of thought and action posed by a romanticized ideology, then it must be resident in another feature of man's thought and action: his rationality. IG Monowitz provides the historical occasion for the question: Within rationality, what are the non-ideological roots of the barbarism at IG Monowitz?

Prior to and during the operation of IG Monowitz, IG's existence was grounded in the drive to be productive. Its agenda was not genocidal, rather its goal was profit and its means was production (Hilberg 1978). This fact is underscored by the magnitude of IG's investment in IG Auschwitz: recall that the capital injected into IG Auschwitz accounted for nearly 23% of the combine's total assets. The opportunity for profit was great; however, the threat of financial ruin was even more staggering. IG's precarious situation was totalizing, in other words, IG risked losing its "competitive efficiency" (Marcuse 1998:43). A competitively efficient firm is that "enterprise with the most highly mechanized and rationalized industrial equipment". It is important to note that," [t]echnological power tends to the concentration of economic power" (Marcuse 1998:43). The drives to produce and be profitable are inextricable because the most productively adept body is that which is most profitable, and vice versa. The problem of

labor/immediate output and the problem of growth/ultimate competitiveness were inseparable problems and resulted in the total and frenetic pursuit of IG's self-interest. Self-interest was important only insofar as it was instrumental to the combine's self-preservation, and that significant insofar that it was metonymic for a false autonomy: the aspiration of the individual entity within technological rationality (Marcuse 1998). The momentum toward brutality at IG Monowitz was initiated by the drive to retain autonomy, which was the perpetuation of the conditions that formed the combine, both intrinsic and extrinsic to it. However, the drive for self-preservation does not always lead toward destruction. The increasingly irrational fixation on efficiency was the essential motivation behind the creation of IG Monowitz and the barbaric productive measures that would be implemented.

As the war effort raged on, so did demand for IG Farben war goods. The unrelenting demand translated into a realization that the output of the withering labor force had to be substantially increased. Conscription and Aryanization of businesses made productive labor scarce, leaving only foreign laborers, prisoners of war, and a small population of concentration camp inmates. Ironically, the very war effort which IG was supplying was constricting the supplies IG needed for the construction of IG Auschwitz. The efficient solutions to these fundamental problems fell within Marcuse's concept of efficiency. Rather than establish more technically, administratively, and logistically complex systems of material distribution, IG employed methods that were notable in their simplicity. For example, the Auschwitz inmates who were forced to labor at IG Auschwitz had to march in excess of five miles every day from Auschwitz/Birkenau to IG Auschwitz (Hayes 1987). The inevitably exhausted inmates before their workday had

begun, ensuring less than adequate productivity. The solution was “simplification” (Marcuse 1998:44), in order to reduce the exhaustion of the slave labor population, the inmates were to be housed on site, at IG Monowitz. This simplified the logistical process, diminishing the distance between means and ends. The purpose of housing all inmates in one location was not to consolidate their brutalization and to reduce the tortuousness of the war-economic industry.

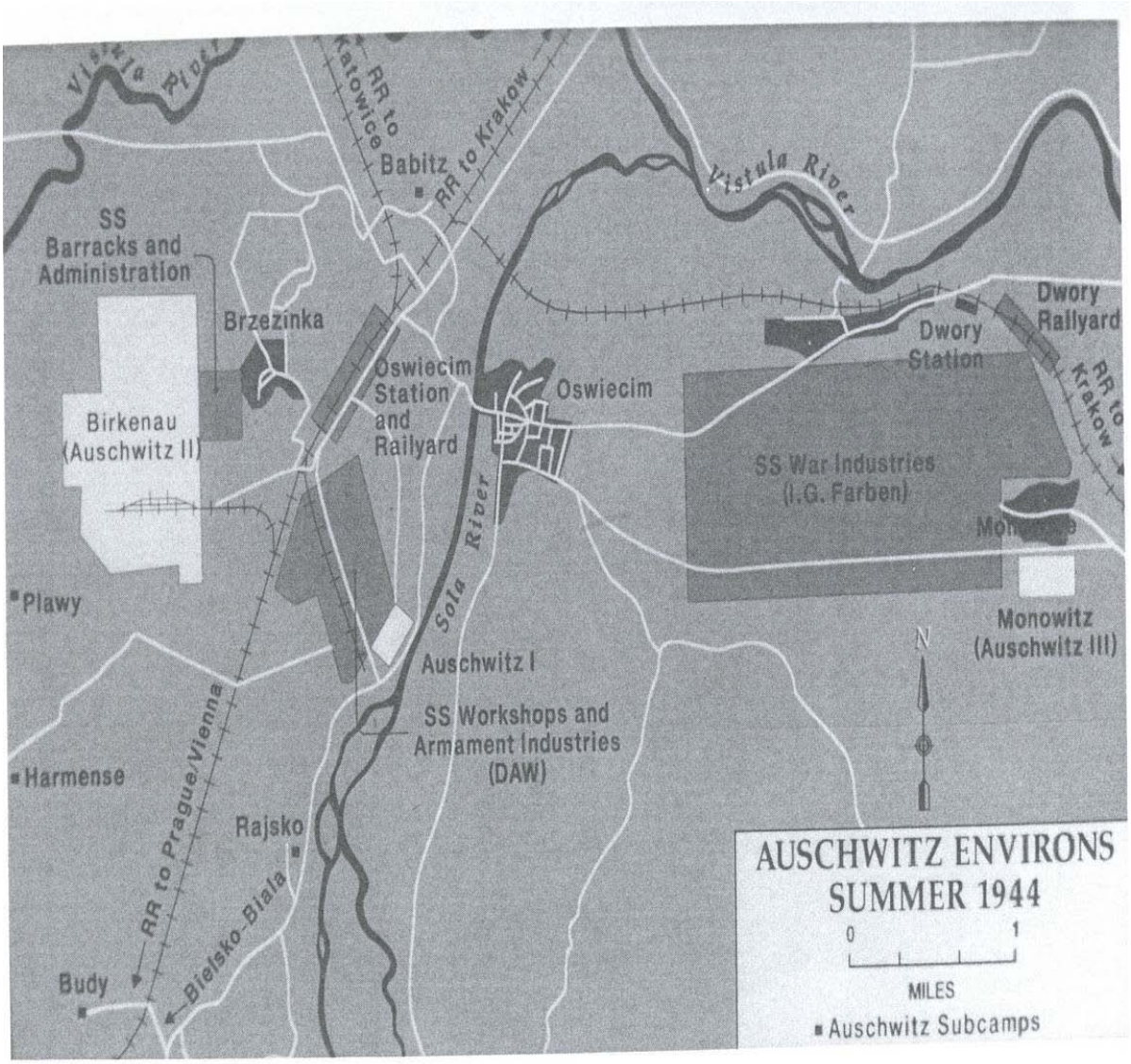
The same type of solution applied to the problem of the dearth of SS guards. It was mandated that SS Guards were required to watch over Auschwitz inmates as they worked at IG Auschwitz. Because the inmate population was far greater than the guard population, there was a limit to how many inmates could be working at any given time. Again, the solution was one of simplification: IG foremen acquired the techniques of SS guards in order to ensure the security of the factories as well as encourage the SS to allow more inmates to work (Hayes 1987). While this solution was purely rational, the tipping point between rationality and irrationality begins to be apparent. As IG Farben sought out SS disciplinary and labor methods in the name of IG’s own productivity, the brutality of the concentration camp and the factory floor were soon to amalgamate.

IG Monowitz invoked the destructive, sadistic, and genocidal practices of Auschwitz, with the critical difference that it did not assume National Socialist goals. Without the punctuation of the horrific goals of the National Socialist agenda, the phantasmagoric narrative of IG Farben seems to approach an explanatory anti-climax: IG Auschwitz was only partially completed and produced almost no war materials.

If the arrogation and implementation of Nazi technology was predominately free of ideological aspirations[9], then what within the system of rationality can be said to have precipitated such barbarism? Within the historically constituted universe of technological rationality, it is impossible to pinpoint a singular cancer of thought or behavior. Thus, the reversion to barbarism in the presence of immense industrial technological prowess can be seen in the hysteria of the flatness of thought and action, or as Herbert Marcuse famously declared, "one-dimensionality" (Marcuse 1964). This is certainly not to absolve IG of guilt, or to promulgate the combine as a catastrophe of capitalist myopia. Rather, it is to assert that the pressure provided by the drive of self-preservation and the drive of efficiency to join means and ends "closes-off" (Marcuse 1964) thought and behavior from alternatives. IG Monowitz is not a manifestation of "tunnel vision" (Katz 2006), because tunnel vision implies a universe beyond the tunnel. Rather, the singularity of thought and action is totalizing, it encompasses all options—it masquerades its inhumanity in its stability and reasonability.

[9] It must be made clear that although, internally IG Farben did not ascribe to the racialist doctrine of National Socialism, it is not the case that productive and technological rationality created a hermetic seal around the combine. It is quite possible that National Socialist ideology contributed a toxic externality, providing an "objective order of things" (Marcuse 1964: 144) that suggested the worthlessness of the inmate laborer. In other words, Nazi racialism may have provided a societal normative content, which facilitated the palatability of the utilization of barbaric productive practice. This point, I felt however, to be too tenuous without further historical documentation of the reception of Nazi ideology by IG.

Appendix A



(Gutman:13)

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