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STILL DREAMING

The Prison-Industrial Complex and Contemporary African-American Slavery

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FRAMEWORK

On March 4, 1858, southern slaveholder James Henry Hammond presented to the U.S. senate one of the most heinous speeches in human history, suggesting that slavery was both socially necessary and culturally sensible. While many Americans hold that such thinking has by centuries passed away, modern corrections practices reveal that slavery has instead grown increasingly subversive. Characteristic similarities between Hammond's address and modern corrections practices in five areas demonstrate 1860s slavery practices persist, unchanged, in the modern day:

- (1) **Individual commodification**, the use of persons for financial gain without regard to their individuality or humanity.
- (2) **Discrete targeting**, the enslavement of particular social or ethnic groups.
- (3) **Extreme longevity**, the maximization of the period of enslavement.
- (4) **Negative characterization**, the framing of enslaved persons as lesser, whether in morality, intelligence or ability—and therefore deserving of the condition of slavery.
- (5) **Social terrorism**, fear mongering directed specifically at convincing the public that to alter the form of the institution in question would damage or destabilize society.

These five characteristics most generally represent the great many formulations of slavery that have existed throughout history, and are thus an *inclusive* framework through which to argue the existence of modern, prison-industrial slavery.



INDIVIDUAL COMMODIFICATION

The shared practice of individual commodification is the most visible aspect of these institution's similarity. Hammond unabashedly embraces such action in stating: "In all social systems there must be a class . . . requiring but a low order of intellect and but little skill. . . . Such a class you must have, or you would not have that other class which leads progress, civilization, and refinement" ("The Mudsill Theory"). Hammond characterizes African-American slaves as fitting *solely* for the duty they have been assigned by the "consent of mankind" ("The Mudsill Theory"). Moreover, Hammond makes no attempt to disguise the fact that he and others "use [African-American slaves] for our purpose" ("The Mudsill Theory," emphasis mine), demonstrating that he and his proslavery contemporaries had conceptualized African-American slaves as an asset to be used by those of a "higher" social or natural right.

While corrections is not explicitly profit-motivated, human commodification is rampant in the American prison industry. Discussing prison privatization, Michael Welch (2003) speaks of the American Jail Association's promoting its 1995 convention through the slogan "tap into the 65 billion dollar local jails market" (p. 235), rhetoric revealing that the inmate humanity is neglected within a prison-industrial mindset: upon confinement, inmates are no longer individuals, but nameless components of a "market" interchangeable components of an institution that will continue to function with or without their presence.

A similarly gut-wrenching avarice at human expense is implied by a statement from Rod Ryan of the Dial Corporation, "I already sell \$100,000 a year of Dial soap to the New York City jails. Just think what a state like Texas could be worth" (Welch, 2003, 235). As did the AJA, Ryan views corrections facilities not as institutions composed of individuals, but as *entities*, evidenced by his referring to the entire state of Texas as a "market." Far more important, however, is Ryan's simple use of the word "worth" within this quotation. This tiny, possibly Freudian slip of the tongue all but explicitly demonstrates that Ryan—like Hammond—considers the inmates he supplies *strictly* as sources of revenue. His concern is not for the welfare of the inmates or their eventual rehabilitation, but entirely for his bottom line. Justice officials' mindsets toward justice, in other words, demonstrate that slavery's key feature is as overtly present in modern day prison industrial practices as in mid-19th century America.



THESIS

Within criminal justice, the presence of ideology and practice similar to that of antebellum proslavery thinkers reveals a modern form of African-American Slavery

DISCRETE TARGETING

The continued functioning of the American prison industry . . . Welch (2003) explains, "requires a steady influx of commodities" (235), aka, prisoners. Thus, crucial to understanding prison-industrial slavery is an awareness of *zero tolerance*. Ismaili (2003) describes its 1970s and 80s emergence as economically motivated, a product of "successive economic recessions, labor management conflicts, . . . political instability" (p. 257) and associated phenomena. 20th century economic hardship forced a market restructuring in which two varieties of employment existed: low-skilled part time work, and "skilled" (i.e., degree-obligatory) employment "aimed primarily at graduates" (Ismaili, 2003, p. 257).

These hardships, Ismaili (2003) explains, simultaneously reduced welfare benefits, intensifying the economic isolation of the already poverty-stricken demographics reliant on such benefits for survival. The disadvantaged, forced to opt for either starvation or criminality, frequently and understandably chose the latter. The consequent growth in crime produced an extreme political ideology emphasizing punishment over rehabilitation—also known as zero tolerance. Ominously, Ismaili (2003) notes that such policies "can be fine-tuned so that only those perceived as a threat to society are affected" (p. 260).



Not only are the disproportionate consequences of zero tolerance for communities of color apparent in current prison demographics, but the targeting of specific groups by criminal justice emerged only recently, illustrating that such discrete targeting is practiced in order to ensure the ongoing profitability of the prison industrial complex. Welch (2003) reports that while in the 1930s, the demographic composition of American prisons was far more equitous—whites represented 75% of prison populations in that era—in the year 2000, 70% of new inmates were African-American or Latino men. Moreover, in 2001, one in ten black men were under "some form of correctional supervision" (parole, probation, etc.; Welch, 2003, 232), while only one in fifty whites and one in 100 members of other ethnicities were in the same position.

The above demographic, however, while greatly distressing, is broadly-known and therefore mundane unless taken in the context of Hammond's statement that "[w]e do not think that whites should be slaves either by law or necessity. Our slaves are black, of another and inferior race" ("The Mudsill Theory," emphasis mine). To correlate Hammond's rhetoric and prison-industrial slavery in this case, it is useful to distinguish between *ideological* and *practical* slavery. That is, American corrections can be termed an institution of slavery on the grounds that it reflects in *practice*, demographically speaking, Hammond's *ideology*. While Hammond's referring to African-Americans as an inferior race allowed a great deal of slavery to persist in his era, far more disturbing is the fact that supposedly long-outdated notions relating to ethnicity persist in the modern day, a period characterized by the routine denunciation of slavery as a peak atrocity. Interpreted through historic proslavery rhetoric, the targeting of specific communities by criminal justice demonstrates clearly the presence of a *covert* form of slavery within American prisons, if not slavery of the overt variety.

EXTREME LONGEVITY

Similarities between American prisons and Hammond's rhetoric unfortunately transcend demographics. Slavery's hallmark—its being a position of *extreme longevity*—is pervasively present in industrialized corrections practices. As Welch (2003) explains, the profit potential of American prisons leads individuals at every stage of the justice process to unjustifiably lengthen sentences. Inmates of a New Mexico prison owned by the Corrections Corporation of America, for example, "lost good time [good behavior that reduces sentence length] eight times more frequently than prisoners in a state institution" (Welch, 2003, 261; emphasis mine). Privatized prisons, motivated purely by profit, routinely extend sentences with such abandon that such actions cannot be motivated by any other factor than profit. Privatized corrections facilities artificially maximize the length period for which their commodities are confined—paralleling Hammond's statement that "our slaves are hired for life" ("The Mudsill Theory"). Considering this rhetorical parallel alongside the fact that, on average, white inmates receive an average sentence of 32.1 months, and black inmates an average of 64.1 (Mustard, 2001, 296), it is undeniable that judicious effort is applied to ensure that those enslaved in the corrections industry are confined for as long as possible, and that African-American inmates are singled-out for such extended confinement.



NEGATIVE CHARACTERIZATION

Beyond revealing institutionalized racism, correction's unchallenged targeting of black communities indicates a lack of public acknowledgement of the U.S.'s discriminatory justice system—indicating that Americans have come to *negatively characterize* criminals as lost causes. The consequences of this negativity fall largely to communities of color, Welch (2003) explains, as media frequently and erroneously suggests to the public that "crime [occurs] primarily at the street level involving young, low socioeconomic black and Latino males" (p. 229).

Reinforcing this stereotype is the common view of crime as necessarily representative of poor character rather than a complex collection of social influences. While historically, the United States' emphasized criminal rehabilitation and reintegration—what Ismaili (2003) calls a "criminology of inclusion" (p. 259)—the severe economic recessions that defined the 1970s and 80s, combined with the media attention surrounding criminality, led to the view of criminals as unworthy of reformation—what Ismaili (2003) calls a "criminology of exclusion" (p. 259; emphasis mine), facilitating what may be called *acceptable ignorance*. Citizens are justified in pronouncing undue hardships faced by American prisoners to be well-deserved so long as those criminals are "incapable" of positive change. Welch (2003) warns that such an attitude "threatens to erode any humanistic approaches to crime" (p. 237), demonstrably so for communities of color. Compare this attitude with antebellum proslavery rhetoric's aim to characterize black slaves as naturally deserving the condition of slavery in an effort to divert public attention from it. Recall Hammond's referring to black slaves as ". . . a class requiring but a low order of intellect and but little skill" ("The Mudsill Theory"), and the connection between modern prison-industrial and historic slavery is concrete. Both institutions characterize their human commodities as lesser, justifying the public's tendency to ignore even the great injustices to which they are subjected—all for the purpose of maintaining the economic industry they unwittingly fuel.

SOCIAL TERRORISM

Part-and-parcel to the debasement of inmates are the unscrupulous scare-tactics utilized by corrections officials to persuade the public that justice reform is unnecessary. Public officials, Welch (2003) explains, frequently sensationalize crime, overemphasizing its prevalence and severity in order to glean public support by promising solutions to such ills. Louis Freeh, formerly director of the FBI, stated in 1995 that "the ominous increase in juvenile crime . . . portend future crime and violence at nearly unprecedented levels" (Welch, 2003, 230). Note that, by the FBI's own statistics, this pronouncement came in the midst of a *decline* in overall crime rate ("Crime in the United States").

The social consequences of such deception are immediately apparent. Welch (2003), reporting on the research of sociologist K.D. Tunnell, revealed that "49% of those [Tunnell] surveyed believed that [media accurately represented violent] crime" (p. 230), when in fact, news outlets overrepresented violent crime by 1,000% at the time. Moreover, statistics provided by Welch demonstrates a hopeless overestimation of crime rate by the American public. In a three-year Gallup poll conducted between 1996 and 1998, "a decisive majority of the American public believed crime had increased since the previous year" (Welch, 2003, p. 230), when in fact the opposite was true in each year studied. Additional surveys conducted in Florida and Oregon revealed that public belief regarding sentence length and early release due to overcrowding, respectively, depart significantly from statistical reality. The Floridian survey revealed that citizens believed "inmates served on average 40% of their original sentence" (Welch, 2003, p. 230-231), when the actual average time served—85%—was more than 200% higher. Meanwhile, the latter, Oregonian study revealed the common public perception that "large numbers of both violent and nonviolent prisoners are released early due to prison overcrowding," when in fact, "none are released early due to prison overcrowding" (p. 231).

The significance of the public's being misled to the continued survival of the prison industrial complex, and by extension its correlation to historic slavery, should be immediately clear. Fear engendered by suggestions of "rampant" crime persuade the public that absent an extraordinarily harsh prison system, society would be at the mercy of its criminals. The prison industrial complex, in other words, continues to survive based largely upon public fear, precisely the same sentiment that allowed antebellum slavery to persist for decades. In concluding his address, Hammond warned that "Our slaves do not vote. . . . Yours do vote . . . If they knew . . . that the ballot box is stronger than 'an army with banners,' . . . where would you be? Your society would be reconstructed, your government overturned, your property divided. . . ." ("The Mudsill Theory").

Hammond's intentions here are obvious: he aims to engender fear in his opposition and encourage the North to abandon its quest for abolition. Identically, the modern corrections industry warns that criminal leniency prescribes additional crime and social destabilization in order to distract from prison-reform movements. Combining this stark similarity in rhetoric with the knowledge that criminal justice disproportionately affects persons of color at every point in the justice process, and the inevitable—if infuriating—conclusion is that slavery is as present in American society today as the day Hammond presented before the senate.



THE CIVIL RIGHTS ERA LIVES ON

Even for those persons of color not yet enslaved by the corrections industry, the *threat* of becoming enslaved is constant. To be sure, genuine racism exists in modern America, but to consider this the sole or even the primary cause of the overrepresentation of African-Americans in modern corrections is shortsighted, and for that matter, a distraction. In order for positive change to be affected within communities of color and society at large with regards to criminal justice, a *comprehensive* effort, at the center of which lie education, early-intervention programs, positive peer interaction and countless other elements, must be pursued with dedication and perseverance.

It seems the habit of every society to examine itself only decades or centuries before and pronounce that former self atrocious and intolerant. Without question, the constant atmosphere racism within the United States was dead and buried years ago, but its embers continue to find their corruptive way into the only recently-built floorboards of equality and equity. Perhaps, were this writing examined a century from now, it would be debated as racist simply for using the term "African-American." Perhaps my even being aware of ethnic issues will lead me to be termed an intolerant fool when a millennium has passed since these words were penned. Perhaps humans are merely fumbling in the dark, but if there is one burning torch in the shadowed halls of social change, it is a duty to both mankind and morality to search ceaselessly for it.

Brachistochrone

The Brachistochrone problem is an age old problem in physics. The name (Brachistochrone) is derived from Greek word Brachistos (shortest) and Chronos (time). For many years an answer to the Brachistochrone remained elusive. In 1696 Johann Bernoulli challenged other mathematicians to solve the Brachistochrone problem. Many of the greatest mathematicians in history worked on this problem. Originally four solutions were presented in the Acta Eruditorum. The mathematicians to solve the age old problem were Newton, Leibniz, Johann Bernoulli, and Jakob Bernoulli. The solution was found by bridging the gap between mathematics and physics. The problem was set up with Physics and mathematical principles which were then simplified into an answer. The solution was determined again and again to be a simple cycloid. Jakob Bernoulli's solution was later generalized by Euler to become the beginning of Calculus of Variations. The problem itself is one of pure intellectual pursuit and doesn't have much importance in application. The real significance is the variety of solutions to the problem. These solutions validate old conclusions and produce new perspectives on the problem. The new perspectives often led to new realizations. Sometimes an old dog can be taught new tricks.



Johann Jakob Leibniz Newton Euler

- The problem states:
 - to find a curve along which a particle will slide in the minimum time from A to B, the second point is lower than B but not directly beneath it.

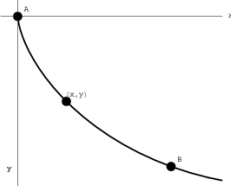
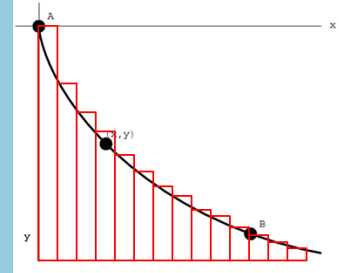


Figure 1: Particle falling on a solution curve

Brachistochrone: Foundation

- Graph of particles direction to satisfy the shortest time
- Assumption:
 - Gravity is homogeneous → Velocity is constant
 - No Friction
- Variables:
 - m = mass
 - v = velocity
 - g = gravity (9.8m/s²)
 - y = height
- $ds = \sqrt{1 + (y')^2} dx$ (Arc length)
- $\frac{mv^2}{2} + mgy = 0$ (Conservation of Energy)
- $t = \frac{s}{v}$ (Uniform speed motion)
- t (time) = $\int_0^x \frac{ds}{v}$ (Finding area under curve)

Finding position function



Differential Equation Solution

$$(1 + y'^2)y = k^2$$

$$y' = + \sqrt{\frac{k^2}{y} - 1}$$

$$k^2 \frac{2(\sin(t))(\cos(t)) \frac{d(\sin(t))}{\cos(t)}(dt)}{\cos(t)} = (dx)$$

$$2k^2 \int (\sin(t))^2 dt = \int dx \quad (\text{Substitute } (\sin t)^2 = (\cos(2t) + 1)/2)$$

$$k^2 \int \cos 2t + 1 dt = \int dx$$

$$k^2 (-\sin(2t)/(2) + t) = x + c \quad (y = k^2 (\cos(2t) + 1)/2)$$

$$\frac{k^2}{2} (\theta - \sin(\theta)) = x \quad ((\cos(\theta) + 1)/2) = y \quad (y = k^2 (\cos(2t) + 1)/2)$$

Calculus of variations Solution

- $\int \frac{dy}{\sqrt{y}}$
- $= \frac{1}{\sqrt{2g}} \int \frac{1}{\sqrt{y}} (1 + y'^2) dx \quad y = dy/dx$
- $\frac{1}{\sqrt{y}} (1 + y'^2) - \frac{y'^2}{\sqrt{y}(1 + y'^2)} = \text{constant}$
- $y(1 + y'^2) = 2c \quad y_1 = \tan \psi$
- $y = c(1 + \cos(2\psi)) \quad dx = dy (\cot(\psi))$
- $x = a - c(2\psi + \sin(2\psi))$

Solution

$$x - x_1 = R(\theta - \sin \theta) \quad (10)$$

$$y - y_1 = R(1 - \cos \theta) \quad (11)$$

These are parametric equations for a cycloid.

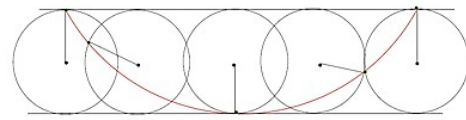


Fig. 5. The path of a brachistochrone is shown in red

These two examples of solutions of the Brachistochrone problem display the variety of ways to find the solution of the Brachistochrone. The structure of the problem is the same, yet the path to the solution is different.

Beginnings of Calculus of Variation

The Brachistochrone helped to create calculus of Variations by utilizing the concepts below.

Ordinary maximum and minimum theory:

$$f(a + \epsilon) - f(a) > 0 \text{ minimum}$$

$$f(a + \epsilon) - f(a) < 0 \text{ maximum}$$

$$f(a + \epsilon) = \epsilon f'(a) + (1/2)(\epsilon^2)(f''(a)) + 0(\epsilon^3)$$

This is to determine the shortest time which is dependent on the $f''(a)$.

Weak Variations:

$$I = \int_a^b F(x, y, \frac{dy}{dx}) dx$$

The concept explains the slight manipulation of the original equation in order to validate a maximum or a minimum of the original function.

$$y = s(x) + \epsilon t(x)$$

$$I_s + \delta I_s = \int_a^b F(x, s(x) + \epsilon t(x), s'(x) + \epsilon t'(x)) dx$$

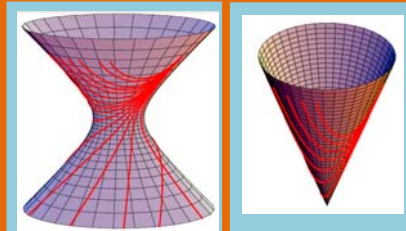
Eulerian Characteristic Equation:

This is a specified equation to find the stationary point (minimum or maximum point) for a weak variation.

$$F - y' \left(\frac{\partial F}{\partial y'} \right) = c$$

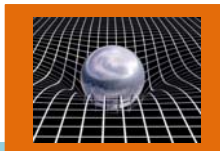
Modified Assumptions

In closer examination of the current literature, it was discovered that many modifications were made to the original problem. Specifically interesting modifications included solving the Brachistochrone problem with non-homogeneous gravity. The variations on the assumption provided in the original Brachistochrone problem, require more knowledge of physics and mathematics. The solution provides insight into how time is affected by non homogeneous gravitational fields. The paper specifically describes the process by which the solution is affected when applied to 3-D surfaces under homogeneous and non homogeneous gravity. The Object to the left is called a hyperboloid of one sheet and the object to the right is called a cone.



Einstein: Theory of General Relativity

The theory of general relativity is often referred to as one of the most significant developments of Physics. In a simplification the theory states space is a fabric affected by the mass of objects causing gravitational pull. Einstein was a brilliant individual, although due to his lack of extensive knowledge in mathematics was unable to represent his ideas properly. This is an idea seen in society to often. Scientist specialize in their field and don't necessarily have an adequate understanding the mathematics behind their theories and as a result often have trouble proving their concept. Einstein was no different he often had to collaborate with mathematicians in order to correctly represent his ideas in mathematics. This often inhibited his work on general relativity. One of the math concepts he utilized was Calculus of Variation. The Palatini Method to solve the metric and the affine connection.



A symbiotic relationship exist between mathematics and physics. Many often forget the true importance of these two fields working in tandem. Mathematics is the pattern finder and Physics is the answer to why those patterns exist.

Applications of Calculus of Variations:

Calculus of Variations deals with problems where there is a relationship (function) between more than two variables.

Calculus of variations can be applied to problems where multiple variables are tied together in a relationship but largely unknown.

Examples of uses are Quantum mechanics and General Relativity

Significance:

In reality many questions remain unanswered and many discoveries remain undiscovered due to the disconnect that occurs between mathematics and science. Often Physicist cannot prove their theories because a lack of knowledge of the mathematics required to prove their conclusions. Therefore the research conducted on the Brachistochrone problem with its many solutions and variations, is pivotal to inspire future students to be multidisciplinary in order to eliminate the delay Einstein encountered. The relationship between mathematics and physics persist into the creation of new theories. These theories then help push society into the future. As engineers utilize the theories in order to develop new machines. Machines seen in the popular science fiction show Star Trek are brought to life. Such as the replicator which is an earlier version of the 3-D printer.

Physics:
Brachistochrone



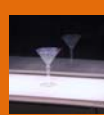
Math:
Calculus of Variations

Math:
Calculus of Variations



Physics:
Theory of General Relativity

Science Fiction
Replicator



Reality
3-D Printer



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