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Social Creatures: The Impact of Solitary Confinement on Psychophysiological Health and How Inmates Percieve Their Humanity and Social Well-Being

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SOCIAL CREATURES: THE IMPACT OF SOLITARY CONFINEMENT ON PSYCHOPHYSIOLOGICAL HEALTH AND HOW INMATES PERCEIVE THEIR HUMANITY AND SOCIAL WELL-BEING

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Abstract

This paper will define and examine the use of solitary confinement within the United States prison system and review its mental, physical, and social impacts. As social creatures, human mental and physical well-being depends on meaningful social interactions absent in segregation units. As it currently stands, vulnerable populations, including racial minorities, LGBTQIA+ individuals, and those with developmental disabilities or psychological disorders, are at risk of irrevocable harm and abuse within these facilities from staff as well as other inmates. With a rotating 80,000 inmates held in solitary confinement every day, the current structure of the prison system deemphasizes rehabilitation and favors unjust and unnecessary punishment. The topic of solitary confinement cannot be explored through science alone but through an interdisciplinary literature review of primary sources in physiology, neurobiology, psychology, law, sociology, political science, and history. With this approach, proper attention can also be given to the experiences of those caught in this system. The overwhelming evidence of the inefficacy of solitary confinement as a method to solve the institutionally created issue of mass incarceration further punctuates the need for policy reform and systematic change against the root causes of exploitation and punitive segregation.

Introduction

On April 13, 2023, The Guardian reported that 29-year-old Joshua McClemore "died in the summer of 2021 from dehydration and malnutrition [having been] left naked in solitary confinement for three weeks with no medical attention."[35] McLemore, who suffered from schizophrenia, "was left in a small, windowless cell for 20 days straight in Jackson county (Indiana) jail[35]." The article states that the cell had no bed or toilet facilities and had bright fluorescent lights on 24 hours per day. Video from the entirety of his stay shows McLemore in a state of psychosis, "rolling in his own waste" and "becoming clearly emaciated."[35] He was served meals through a slot in the door but was witnessed to rarely eat. "He had extended human interactions on only four occasions – when guards used intense force and restraint devices to drag him out to clean the cell or give him a shower."[35] He lost 45 pounds in three weeks but never saw a physician. On the 20th day of his stay, he was found poorly responsive, but only after 2 hours were medical staff called. He was taken to a hospital where he was found to suffer from severe dehydration, insufficient oxygen in his body tissues, kidney failure, impaired brain function, and other catastrophic health problems. He was airlifted to an Ohio hospital, where he became comatose, before he was declared dead on August 10th. A coroner cited "multiple organ failure due to refusal to eat or drink with altered mental status due to untreated schizophrenia."[35] Indiana law dictated that inmates be allowed out of solitary confinement for an hour each day unless safety precluded this and that persons in solitary confinement be observed every 15 minutes. They report that "State documents show inspectors also repeatedly deemed the facility

non-compliant with a law mandating jails arrange for 24-hour emergency psychological care."[35] McLemore was incarcerated after pulling a nurse's hair during an inpatient stay for acute psychosis. He should have never been there in the first place.

State of the System

"*All prisoners shall be treated with the respect due to their inherent dignity and value as human beings.*"[20] - High Commissioner of the United Nations Human Rights Office

The United States of America has the highest rate of incarcerated individuals in the world, with 1.9 million people in prison or jails. This means that almost one out of every 150 people is in prison or jail.[58] Roughly half of the inmates have mental health conditions, with 20% deemed severe[11]. The most common cause of death in the prison system is suicide.[58] Half of those suicides are represented by individuals placed in solitary.[27] The Prison Industrial Complex emanated from the relationship created when corporations were allowed to manage prisons on behalf of the state and federal governments as a means to generate profit.[52] The American prison system consists of 1,566 state prisons, 102 federal prisons, 2,850 local jails, 1,510 juvenile correctional facilities, and 186 immigration detention facilities[58].

This country has seen a 700% increase in its prison population since the 1970s.[58] During this time, an increasingly punitive political climate utilized "fear and thinly veiled racial rhetoric" to argue for harsher laws.[15] President Richard Nixon's 'war on drugs' in the 1970s caused mass incarceration rates to be highest amongst black males.[15] Sentencing length increased disproportionately for drug offenses during President Ronald Reagan's administration, and the national prison population more than doubled.[15,69] In the 1990s, Congress and 21 states implemented the "three strikes and you're out" law for repeated violent and serious felonies, increasing the minimum sentencing time to 25 years.[69] This unprecedented upward trend in the prison population is the product of the "increasingly harsh policies and conditions of confinement" and a societal "de-emphasis on rehabilitation as [the] goal of incarceration."[24]

Outside the death penalty, solitary confinement is the harshest punishment given to prisoners. Under the definition of the UN Standard Minimum Rules for the Treatment of Prisoners, solitary confinement is the "confinement of prisoners for 22 hours or more a day without meaningful human contact."[62] In contrast, standard prison housing dictates one to two prisoners per open-faced barred cell, with daily socialization through meal time, exercise and recreational activities, job training, and in-facility employment.

Most solitary confinement cells are 60 to 80 square feet concrete rooms "with a cot, a toilet, a sink, a narrow slit for a window," and occasionally a small desk.[13] The holding facilities have different names across the justice system: "administrative maximum units, administrative segregation units, special housing units, secure housing units, segregation units, isolation units, close custody units, control units, management units, adjustment centers, and supermax units."[19]

Most cells have bright and noxious fluorescent lighting that runs all day and night. In order to limit the amount of direct contact between staff and inmates, communication is often reduced to intercoms and surveillance systems. Food is provided through a small slit in the door.[13] Depending on the type and severity of segregation, inmates are stripped of their possessions. However, they may be given reading material, but this is rare for administrative segregation and disciplinary segregation, as discussed below. Inmates will spend, on average, 23 hours in their cells every day. They are given 1 hour to spend either in a larger isolated room for limited exercise and recreation or to shower. In high-security prisons, inmates remain cuffed and restrained when outside their cells.[13]

These restrictions are done under the guise of maintaining the safety and well-being of the isolated prisoner, other inmates, and staff and for the stability of the system.[63] Those in support of solitary confinement often cite that isolation decreases a person's probability of committing another offense and that witnessing someone in solitary confinement may act as a general deterrent for other inmates.[61]

Rather than fulfilling these goals, solitary confinement exacerbates the problems it was created to alleviate.[24] For one, most research indicates that time spent in secure housing units (SHUs) raises post-prison recidivism rates or the propensity of a convicted criminal to re-offend. Today these inmates face considerably more barriers to reentry into free society and lack the proper support to give them a fighting chance at success.[24] Secondly, solitary confinement facilities have much higher construction, operating, and other costs than other forms of prison housing units.[24] Moreover, studies have shown that the adoption of SHUs into the U.S. prison system has had counterproductive effects on the total incidence rate of assaults on staff and inmates.[6] In the end, solitary confinement is the U.S.'s inferior and failed solution to a self-inflicted problem.

Origins of Isolation

The first recorded use of solitary confinement in the United States began in the early 1830s at the Eastern State Penitentiary in Philadelphia, Pennsylvania, a facility pioneered by Quaker ideologies.[66] Prisoners were given silence, solitude, and typically a Bible to reflect and pay penitence for their crimes. With the hope of repentance and rehabilitation, isolated inmates would be "unclouded by the temptations of 'sinners' and the world."[13,61] The silent prison reform gained media traction and found its way to Europe. French diplomat and philosopher Alexis de Tocqueville, after visiting one of these progressive prisons in 1831, asserted, "this absolute solitude, if nothing interrupts it, is beyond the strength of man; it destroys the criminal without intermission and without pity; it does not reform, it kills."[66] His critique was appropriate, as Eastern State Penitentiary and other institutions saw increasing levels of suicide, physical and psychological damage, and the inability of prisoners to acclimate to life as free

persons once released. The use of corrective isolation was gradually reduced over the course of the nineteenth century but often persisted for racial minority groups.[13]

The case *Medley, Petitioner, 134 U.S.160* was important in furthering the reduced use of solitary in the US in the 1890s. James Medley was convicted in court for the murder of his wife and sentenced to death by hanging. The court ordered Medley to be placed in solitary confinement until the date of execution. After 45 days in solitary, Medley went to the Supreme Court claiming that the time in isolation was not befitting of the Eighth Amendment clause of no cruel or unusual punishment.[43] Justice Samuel Freeman Miller, who presided over the case, observed that those worst affected by the isolation were in a poor state and that there was a lack of evidence of reformation in those who "stood the ordeal better."[43] In this case, the death penalty was overturned, and Medley was released. The Medley trial resulted in reduced use of solitary confinement in America.[43]

In the 1930s, prisons began using solitary confinement again as a method of punishment, despite lacking any significant evidence of the efficacy of the practice's rehabilitative qualities. The establishment of Alcatraz Federal Prison in 1934 signaled a shift away from a legal system and national culture that favored rehabilitation toward one that concentrated on punishing people they deemed unfit to function in regular society. Alcatraz was repurposed into the country's first maximum security prison, a place to lock up the country's worst and most dangerous criminals.[66] With Alcatraz, the federal government wanted to display its power after the loss of public opinion over the unchecked crime of the 20s and early 30s. The infamous "D Block" on Alcatraz, where some inmates spent years in their cells with minimal human contact, was home to some of the worst cases of inmate abuse.[66] "The Hole," as it continues to be colloquially referred to today, was a small concrete, windowless room where inmates were stripped naked and removed from all possessions and interaction. Food was limited to bread and water pushed through a small hole in the door. Since the only toilet was a hole in the floor and the waste on the island had to be manually shipped off to the mainland, it was a highly unsanitary environment.[39]

Although Alcatraz was closed down in 1963, the practices used there had already become popular across the country. The first permanent lockdown facility was created in 1983 at the United States Penitentiary Marion in Illinois after the murder of two prison guards.[55] Thomas Silverstein and Clayton Fountain, members of the Aryan Brotherhood gang, separately murdered these two officers after being placed in a high-security control unit for murdering two other inmates. Solitary confinement was deemed the most 'effective' way to ensure the safety and health of inmates and prison staff from violent offenders. The prison warden instituted a 23-year-long lockdown at USP Marion, turning the entire facility into the first super-maximum security prison.[55] After this incident, the prison system started heavily penalizing gang members with or without provocation. Today prisoners with suspected gang affiliations are much more likely to spend time in solitary confinement in order to prevent any harm they *may* commit.[4] In a survey conducted by John Winterdyk and Rick Ruddell of 37 prison employees who actively work with gang-related violence, 94% stated that solitary confinement is the most effective deterrent, even though there is no proof that confinement affects prison gangs' size, number, or operation.[29]

Since 1983, the standard practice of solitary confinement, 23 hours of isolation in a small cell with one hour given for solitary exercise or showering in similarly restrictive rooms, has become routine. According to Haney, today, one in five prisoners spends time in solitary confinement.[24] It has also become common to discontinue any educational, work, or rehabilitative programs for these inmates.[66] Prison architecture is designed around isolated incarceration, with the creation of secure housing units at California's Pelican Bay State prison in 1989, the first federal administrative maximum (ADX) prison in Florence, CO in 1994, and 39 more control-unit prisons built by 2005.[66] Additionally, despite confinement becoming a common practice, the media release of information on high-profile criminals placed in solitary confinement created a public perception that solitary confinement is only used for what would be considered the 'worst of the worst' in terms of criminal activity and violence.

In the United States today, more than 80,000 people every day experience what a hundred years ago was considered proper punishment for only the most extreme and violent criminals.[61] 20,000 of these are held within supermaximum facilities specially designed for total and inescapable isolation.[25] Even as incarceration rates have declined over the last decade, the population of inmates in solitary confinement has grown.[12]

Forms of Punitive Segregation

Under the current legal system, incarcerees can be placed in solitary confinement for three main causes — disciplinary segregation, administrative segregation, and protective custody.

At its simplest, disciplinary segregation consists of time-limited confinement after an inmate commits misconduct. This form of segregation is quantified explicitly as a form of disciplinary punishment, so inmates are "afforded due process rights."[19] They are isolated for a short-term but predetermined quantity of time.[14,61] The goal is that a short time in solitary confinement will reduce further rule and safety infractions. Although still very present, the long-term damaging effects of isolation are less common in these cases.

Administrative segregation is much more complex and does not share the same set of regulations or standard protocol as disciplinary. Prison staff can 'justify' confinement if the inmate's isolation removes "a serious threat to life, property, self, staff or other inmates, or to the security or orderly running of the institution"[61] enabling a structure of abuse. While coded as a non-punitive response, administrative segregation facilitates large power imbalances, leading to prisoner abuse, cruel punishments, and the disproportionate targeting of vulnerable and profiled populations, i.e., those suffering from mental illness, racial groups, or gang relations. This is not helped by the majority of correctional officers being white men.[59] African American inmate John Richards was charged with assault and spent six months in solitary confinement after an attack by correctional officers who called him "monkey."[59] The duration, freedoms, and resources available in solitary are determined at the discretion of the prison staff. Until it can be reasoned

that an inmate no longer poses a continued threat to the institution and its inhabitants, prisons can hold them in isolation indefinitely.[13,61] Furthermore, overcrowding, staffing shortages, and inadequate funding for mental health care have created conditions where prisons are much more likely to justify punitive segregation for minor infractions.

Conversely, protective custody solitary confinement is utilized when the general population poses a threat to an inmate or small group in particular. Individuals with 'perceived' vulnerabilities to other inmates, such as those with developmental disabilities, queer sexual orientation, and mental disorders, can be isolated either voluntarily or involuntarily. If an inmate provides incriminating evidence or information in a court case or within the prison implicating other inmates, they can be placed in solitary for their own protection. Although protective custody is not intended to serve as a punishment, the standards of care and privileges available often do not differ from administrative or disciplinary segregation.[59] As a result, they are susceptible to the same consequences from solitary confinement as those placed there for other reasons.

Social Creatures

Years of research in physiology, neuroscience, psychology, law, and sociology have led to the same conclusion: humans are social creatures that require connections, relationships, and interaction to survive and meaningful contact to thrive. This includes "learning by social observation,"; "navigating complex social hierarchies, social norms, and cultural developments,"; and "orchestrating relationships, ranging from pair bonds and families to friends, bands, and coalitions."[8] Positive social experiences influence how we view ourselves and, as a result, significantly impact how we perceive ourselves, our worth, and our ability to endure suffering or failure.[72]

Because we are social creatures, long-term deprivation of regular socialization and meaningful social contact can harm or distort "[people's] social identities, disrupt their sense of self," and, for some, ultimately impair their capacity to operate 'normally' in a free society.[24] Isolation can separate the mind from bodily pain, increasing the risk of self-mutilation and suicide to elicit some form of response either from themselves or to seek the attention of others.[14] Haney explains that social isolation's destabilizing nature "deprives persons of the opportunity to ground their thoughts and emotions in a meaningful social context" - unrestrained by bars or glass and consisting of intentional positive stimulation - to determine the appropriateness of their feelings and behaviors.[25] Relationships formed in capricious circumstances or that directly play into strong power disparities cannot suitably replace positive social stimulation nor provide a meaningful social context. Constant social hypervigilance promotes trust issues, emotional reactivity, and a warped perception of healthy interactions.

When we abandon or cut someone out from the community, we are stripping them of their humanity and our own. The South African philosophy of Ubuntu, humanness, centralizes on Umuntu ngumuntu ngabantu, or that a person is made a human by other humans. In return for

gaining one's humanity from social solidarity, we must recognize the humanity of others or lose it altogether.[16] It takes a network of interconnected commitments throughout all periods of life to create and sustain social personhood, and it takes a communal network of exclusions, interruptions, and violations, to decimate that personhood.[23] Isolation, then, results in social death, or the repercussions of patterns of abuse whereby a person or group of people is excluded, dominated, or degraded to the degree that they feel dead to the rest of society.[23]

The Body in Isolation

One of the primary ways humans and non-human models express compassion, connectedness, and intimacy is through physical touch.[25] In primates, the nurturing act of social grooming is equivalent to stroking, caressing, touching, and hugging in humans.[72] Both excite mechanoreceptors, or touch receptors, in the skin that transmit sensory information down afferent Aβ nerve fibers. Aβ fibers are 6-12 μm in diameter and have heavy myelination, and conduct inputs quickly to the central nervous system.[57] Aδ (sharp and sudden) and C (dull and throbbing) nerve fibers receive pain stimuli from the free nerve ending in the skin. Aδ and C fibers have little to no myelination, respectively, and greater internal resistance attributing to a slower conduction velocity.[57] Since touch receptors travel much faster from the point of stimulus to the central nervous system than pain receptor signals, the touch receptor signal is essentially able to override the pain receptor signal alleviating pain perception.[75] Positive tactile stimulation also triggers the release of neurochemicals called endorphins that reduce pain sensitivity.[72] Without positive human touch, people in isolation have increased pain perception.

Loneliness or perceived isolation can have consequences on physical health. Research indicates high levels of vascular diseases, high blood sugar, inflammation, muscle atrophy, and impaired immune system functions in inmates.[61] Using data from a 2015 lawsuit, Williams reports a 31% higher frequency of hypertension among inmates in SHUs than in non-isolated maximum security units.

In a 2017 study, Haney took a representative sample of 100 convicts from both the Pelican Bay SHU and the facility's general population, convicts still under 'supermaximum' conditions, chosen randomly but deemed 'mentally stable' upon incarceration. He conducted structured interviews that included a systematic assessment of the Omnibus Stress Index, which measures twenty-five risk factors and symptoms. He noted the consensus of evidence revealing "heightened feelings of anxiety, emotional hypersensitivity, ideas of persecution, and thought disorders" found among the prisoners.[24] The study found that the SHU prisoners had stress-related trauma and isolation-related pathology levels two or more times greater than those kept in the general population under comparable time conditions.

Prisoners often exhibited symptoms of "isolation panic," coined by Austrian psychologist Hans Toch in an early study that distinguished the pains of imprisonment from those of

isolation.[70] In 1975, Toch and his colleagues conducted in-depth psychological interviews of incarcerees in the New York State correctional system. Isolated prisoners' experiences were marked by instances of self-mutilation caused by anger, panic attacks, loss of control, breakdowns, psychological regression, and increased physical morbidity and mortality.[70] Symptoms seen in isolated prisoners include but are not limited to:

> "(such as decreased appetite, trembling hands, sweating palms, heart palpitations, and a sense of impending emotional breakdown); sleep disturbances (including nightmares and sleeplessness); heightened levels of anxiety and panic; irritability, aggression, and rage; paranoia, ruminations, and violent fantasies; cognitive dysfunction, hypersensitivity to stimuli, and hallucinations; loss of emotional control, mood swings, lethargy, flattened affect, and depression; increased suicidality and instances of self-harm; and, finally, paradoxical tendencies to further social withdrawal."[24]

Inhabitants of solitary units show signs of increased skin irritations - rashes, dry and flaky skin, and fungus - from poor air and water quality, irritant sanitation products, and lack of sun exposure.[65] The monotony and inactivity of confinement exacerbate ailments in isolating environments. Physical pain is severely aggravated with little else to focus on and no positive sensory information to lessen the discomfort. One Washington State Department of Corrections prisoner recounts the feeling of obsessiveness over his dermatitis, saying, "minor things become huge when you're in segregation."[65] His untreated skin rash quickly became scabs bleeding down his head. Society takes for granted the accessibility to casually treat our own ailments but ignores the utter infantilization of inmates when they cannot even choose whether or not to give themselves an Advil when their head hurts.

The lack of sun exposure causes inmates in solitary to be more likely to develop vitamin D deficiency.[49] A review of 526 records of inmates from the Massachusetts Department of Correction's Inmate Management System (IMS) database found that their inmates in maximum security confinement had significantly diminished levels of 25-hydroxyvitamin D (25(OH)D) ($p=0.029$). 25(OH)D is the biomarker for vitamin D levels measured through chemiluminescent immunoassay.[49] Due to the higher levels of melanin in black populations that absorb ultraviolet B radiation and reduce the production of vitamin D, black inmates have an approximately 4 times higher risk of vitamin D deficiency than white inmates at the same degree of isolation.[49] Multiple sclerosis, diabetes, heart disease, mental illness, and a number of autoimmune illnesses have been attributed to low vitamin D levels.[17] Additionally, vitamin D is essential for bone mineralization, maintaining bone strength, and the prevention of fractures and breaks.[49]

Neurobiological Degradation

One barrier to understanding the neurological impacts of isolation is the shortage of available human studies. While it is possible to carry out psychological and clinical studies, these trials would include examining and visualizing the neuropathic degradation of solitary prisoners. Not only are there ethical issues with knowingly subjecting study participants to stressors likely leading to harm, but there are also technological and funding limitations. Few care enough about the potential harm caused to the incarcerated to fund this important work. As such, the more technical biological understanding is primarily found in mouse or animal models.[61]

The COVID-19 pandemic left hundreds of millions worldwide in self-isolation, which led to increased interest in studying the effects of isolation on the brain by both the public and the scientific community. In rodent and human studies, researchers found that those involved in attention and emotion are the primarily affected brain regions displaying a decrease in size/volume and signaling activity after periods of isolation. These are the "salience and frontoparietal networks," such as the inferior colliculus, anterior cingulate cortex, and the prefrontal cortex.[72] Conversely, there is increased activity in the limbic system with the hippocampus and the amygdala.[9,72] Additionally, they discovered that isolated mice had shorter synapses and glial cells, which are necessary for regulating social behaviors and the integration of sensory-motor inputs.[72]

The prefrontal cortex is responsible for the brain's executive function. This pertains to distinguishing between opposing ideas, identifying right and wrong or similar and distinct things, recognizing future consequences for present actions, working toward a specified goal, predicting outcomes, and exercising social control.[53] A comparative study of myelination, a lipid-protein coat around neuron axons that assists in signal transduction, in mice prefrontal cortex held in isolation and in groups of five ascertained that the isolated mice possessed thinner myelin sheaths and reduced myelin gene transcripts.[53] Preventing the mice from returning to baseline levels of myelination and being less able to adapt to future changes. In humans, myelination in the prefrontal cortex is formed during adolescence and decreases with age making isolation in one's youth far more damaging to mental cognition.[40] Demyelination of the axons connecting the prefrontal cortex to the hippocampus has been linked to Alzheimer's disease, schizophrenia, major depressive disorder, and posttraumatic stress disorder (PTSD).[47]

The hippocampus is a part of the body's limbic system with the amygdala, involving the brain's pathways that regulate emotions and behavior, primarily in learning and memory functions. It is also essential in the conversion of short-term memory into long-term memory, moving those memories to other brain regions for long-term potentiation and storage and memory recall.[47] Social isolation damaged adolescent marmoset's ability to fully develop their hippocampus resulting in a "reduced ability to cope with stressful events in adulthood" and increasing the "onset of future mood disorders."[41] Further, Cortisol, a glucocorticoid steroid hormone, regulates metabolic and physiological pathways and the body's stress levels. Under extreme stress, the adrenal gland overproduces cortisol. High concentrations of cortisol are neurotoxic to the neurons in the hippocampus.[51]

Socialization provides protection and support, decreases the body's energy consumption, and models social reward.[41] The mesolimbic dopamine system defines the value of a stimulus and signals it as safe or aversive. Accordingly, dopamine plays an important role in mediating how the brain perceives reward from social stimuli.[42] The Dorsal raphe nucleus in the midbrain contains dopaminergic neurons that are highly sensitive to social isolation.[41] The synaptic strength between excitatory inputs and dopaminergic neurons increases when exposed to isolating conditions.

Depending on their downstream target, these neurons innervate the amygdala and can regulate behaviors like sociality or negative affectivity.[26] The amygdala is a small structure that regulates the brain's ability to respond to threatening and emotional stimuli and regulates the "fight or flight" response.[50] The increased attenuation to emotional and threatening stimuli in isolation causes dysregulation of the reward system. The capacity to discern between various stimuli diminishes from the chronic over-activation of dopaminergic receptors, dampening the rewarding feeling. So when placed into a social environment, isolated individuals' hypervigilance increases stress, and are more prone to outbursts or harmful behaviors.[72] Using functional magnetic resonance imaging (fMRI), Cacioppo discovered that socially isolated people distinguish between dangerous and non-threatening social inputs significantly faster than nonisolated people.[8] High levels of dopamine in the hippocampus and amygdala are linked to individuals that are more competitive, aggressive, and lack impulse control.[72] Using neural imaging, it was found that social people have a more substantial limbic-cortical network coupling, whereas lonely people have a lower functional connection between these networks.[5,34] Thus, the reduced amygdala connectivity to higher-order cortical regions could indicate that these regions are unable to override the hypervigilance and threat sensitivity behavioral response that comes with confinement.[72]

Inmates exposed to isolation do not always experience environments with reduced stimulation but are often exposed to high levels of noxious or negative stimuli. This includes 24 hours of artificial lights, constant noise exposure, and unsanitary conditions that affect the taste and smell senses. Light exposure profoundly impacts the body's natural sleep cycles and circadian rhythms. Circadian rhythms maintain the synchrony between the "central clock" in the suprachiasmatic nucleus (SCN) of the hypothalamus and the "peripheral oscillators" - organs and other body structures.[46] The SCN is the master "pacemaker" of the organism's activity and sleep cycles, nourishment, body temperature, and hormone production.[46] The environmental light and dark cycles influence how many photons enter the retina at a certain time of day and communicate this information to the SCN, which either advances or delays one's internal timing. Light exposure at night acutely inhibits melatonin production from the pineal gland resulting in sleep latency. Desynchrony between the internal timing of the brain and the peripheral organs is linked to cases of obesity, diabetes, immune dysfunction, and cancer, as well as sleeping disorders, depression, and neurological diseases such as Alzheimer's, schizophrenia, and bipolar disorder.[2,73] All of these neurologic factors considered as a whole clearly show that isolated

individuals routinely lose their ability to think, reason, and navigate their environments in healthy ways.

To maintain mental and physical health, individuals need to engage in adequate levels of mental and physical exercise. Atrophy of critical capabilities and skills may result from a lack of perceptual, cognitive, or mental stimulation. Isolation decreases the flexibility to change and causes recurring problems with attention and memory, emotional flatness, and an over-dependence on others. Existing and solitary confinement actively change an inmate's brain chemistry. Changing how individuals are able to perceive people and relationships, love, dangers, and threats. The brain creates new synapses based solely on a routine of interacting in an isolated and volatile environment, precluding successful re-entry and rehabilitation during and post-incarceration.

Access to Medical Care

"The duty of public health professionals is to prevent disease morbidity and premature mortality in all populations by maximizing social, environmental, and structural conditions required for healthy living and abating harmful conditions."[13] - David H. Cloud, JD, MPH

A major contributor to the negative medical and psychological outcomes of prisoners in isolation is the failure of coordinated medical care. Prison medical facilities are not equipped to handle every type of disease or disorder encountered in a general population. Large prisons with high numbers of inmates cannot properly devote the time and resources required to maintain the wellness of prisoners with chronic illnesses. Treatments are often delayed or inadequately sustained, as many medication treatments require consistent administration and observation to allow safe and efficacious treatment.

In addition to insufficient medical resources, prison policies require that security be prioritized over the administration of care, especially in evaluating medical histories. People in SHUs are discouraged from receiving healthcare at all, even in life-threatening situations, due to many "bureaucratic hurdles and barriers."[65] In order to receive medical care, inmates must fill out a paper request, colloquially termed 'kites.'[65] Care will either take place cellfront, in which the person speaks to the medical professional through their cell door, with no privacy from neighboring isolation cells, or by an escort, in which the person is placed in handcuffs and leg-cuffs and taken to a medical treatment space typically accompanied by at least two correctional officers.[65] A Washington State Department of Corrections (WADOC) inmate recounts the difficulty of reinstituting life-saving care when he moved from one facility to another.

> I had a serious seizure. And I was laying on the floor, and I had defecated. I was laying in a puddle of puke…Well, [the guards] had come to the door, and I guess they had called medical…and they were standing there for 45 minutes yelling, "Stand up and cuff up so we can give you medical attention." They did not pop the door and go in there and give

> me medical attention. And so, unknown to me, they popped the cuff port, and they sprayed OC [pepper spray] in there. And then they came in. They noticed that I was unconscious, and finally a nurse looked at my medical file and she's, like, "He's epileptic."[65]

Inmates are further dissuaded from accessing medical intervention in an emergency, consequent to the fear of punishment and the threat of additional sentencing in solitary if the medical team determines that the problem is non-emergent. Many prisons require payment from the prisoner regardless of whether or not treatment was provided. In the WADOC, inmates in their intensive management units are allotted $10 per week for commissary items such as ramen, coffee, deodorant, toothpaste, and other necessities.[65] The inmates are charged a $4 medical fee from their weekly allowance for any intervention from medical staff, which strongly discourages open access to medical care. Because of these systems and policies, most prisoners' physical and mental health problems remain untreated and unaddressed.

Moreover, the prison health care system displays a substantial lack of patient-physician trust, stripping the voice of the patients. Prisoners are prevented from being able to advocate for themselves and protest mistreatment and negligence. Mumia Abu-Jamal, a journalist and activist who has used his time in prison to write about the state of the system, discussed how fellow inmates were forced to accept medication administration in order to keep them sedated and amiable while gross amounts of solitary confinement continued to isolate, manifest, and degrade their cognitive, emotional, and physical health.[1]

At times, medical care teams actively participate in the maltreatment and neglect of their incarcerated patients. This happened in the case of Tammy Perez. Three days after being placed in custody, and waiting for her pre-trial hearing for heroin possession, Perez died in her cell. The cause of death was Cardiac dysrhythmia due to Congenital Adrenal Hyperplasia.[33] Adrenal Hyperplasia is a condition caused by a 21-hydroxylase enzyme deficiency, which prevents the body from maintaining adequate sodium levels.[33] In spite of being informed of her condition and the necessity for time-specific medicine administration by Tammy's mother, the staff only treated her for drug withdrawal symptoms and showed no concern when Ms. Perez rapidly started to deteriorate. Ms. Perez had frequent fecal incontinence, vomiting, and general pain, and repeatedly called for medical staff but was largely ignored. She was seen by the prison physician, who claimed she was "a little upset," but this was perceived to be only under the context of withdrawal.[33] By the third day and last day of her incarceration, Ms. Perez was so weak that she could barely make it to the showers on her own.[33] She passed away alone, covered in her own waste. Given that half of the incarcerated have mental health issues and a similar number have chronic medical conditions requiring specialized care, the amount of gross maltreatment and neglect within our nation's prison medical care system is staggering.

Impacts of Solitary Confinement

Investigations into the consequences of seclusion and confinement were noticeably lacking prior to the 1980s.[24] There are still relatively few formal scientific studies on how the human body responds to being kept in isolation. The few that have been conducted—primarily outside of the United States—insist that their highly regulated experimental conditions significantly diverge from the actual, more severe conditions of prison segregation units. Studies performed in France, Denmark, and Switzerland conclude that prisoners placed in penal isolation for prolonged periods of time show signs of psychopathogenic effects, chronic isolation syndrome, and physiological degradation, especially when contrasted against inmates in the general non-solitary population areas.[24] Even after a short period of time, Danish scientist Koch described inmates with "problems of concentration, restlessness, failure of memory, sleeping problems and impaired sense of time and ability to follow the rhythm of day and night."[24]

A study published in 2001 analyzed the psychological deterioration of Canadian inmates after sixty days of administrative segregation.[76] To 23 voluntary or involuntary isolated and 37 general population inmates, the researchers performed psychological tests, interviews, and cross-sectional screening for psychological well-being at baseline and at 30 and 60 day follow-up evaluations. Remarkably, the researchers found little evidence of a decline in mental or physical health among the subjects. The article, however, cites explicitly that their results are not applicable to the United States prison system, as it does not take into account the consequences of harsh and unsanitary conditions, longer durations of confinement, and the antagonistic and neglectful behavior of correctional staff.[76]

Everyone is unique, and each person enters a solitary environment with varying degrees of sensitivity and susceptibility to adverse and degenerative conditions. Those with developmental disabilities or preexisting mental illnesses are particularly vulnerable to isolation.[13] The literature agrees that the risks of trauma from solitary confinement are time- or dose-dependent, and the risks of psychological and physical damage are expected to rise as the period of exposure increases.[24] The United Nations Special Rapporteur on Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment released a statement insisting that placement in solitary confinement under any conditions over fifteen days should be considered torture.[63] In the United States, it is uncommon for inmates to spend less than 15 days in isolation. The isolation duration is usually at least one month, but it can sometimes continue for years or even decades.[24] One study by Yale Law in 2014, from data analysis of 50,014 solitary inmates from 37 jurisdictions, found that 29% of inmates were held in SHUs between 1 and 3 months and 25% for a year or more.[25]

With few notable exceptions, the individual's mindset and perceived control over their isolation profoundly impacts maintaining mental acuity. It is difficult to determine a given individual's true psychological cost, and rarely is there any effort or time spent to determine these risk factors prior to the onset of isolation. While exposed to disabling conditions, individuals in voluntary protective custody respond less negatively as their safety depends on staying within confinement units.[24] Knowing that you are 'safer' or safe from the clear and

present danger and recognizing that isolation is temporary increases the adaptability of the inmate.

Board Certified Psychiatrist Stuart Grassian and Social Psychologist Craig Haney, known for his work as a researcher in The Stanford Prison Experiment, established a body of literature on the psychophysiological symptoms, disorders, and trauma of prisoners experiencing long-term penal isolation. Grassian studied inmates and plaintiffs in a challenge against the Massachusetts Correctional Institution at Walpole in 1983 for breaches in their constitutional right to be free from cruel or unusual punishment.[24] Haney has been heavily involved in the prison reform movement since the 1970s. He stood as an expert witness in the 1995 case, Madrid v. Gomez, against the California Department of Corrections at Pelican Bay State Prison's SHUs and continues his work with inmates from the SHU.[24]

The Madrid v. Gomez case revealed that within the SHU, only highly inadequate psychiatric or mental health screening standards precluded entry into isolation. This negligence often meant that prisoners with particular risk factors were placed in isolation without any safeguards, and intervention only occurred if the inmates were "flagrantly psychotic or suicidal."[4] Even then, the intervention provided by SHU staff included neither inpatient care nor the removal of the patient to outpatient service facilities.

This trial revealed instances of prisoner assault by staff, restraining prisoners by 'hog-tying' their hands and feet behind their backs — one such after attempting to get the guard's attention to close the door to the cold air by banging on their door after no response. Officers were accused of forcing inmates into cages exposed to harsh weather conditions and resorting to the unjustified and irresponsible use of excessive or lethal force.[4] Guards would use cell-assignment protocols that put inmates at an unreasonable threat of being physically assaulted by fellow inmates. The trial spent a significant amount of time reviewing the video files and inmate and expert testimonies of the evidence of excessive force for 7 cases of staff assaults on inmates.[38] Even when prisoners committed minor infractions, such as when Arturo Castillo refused to return a food container after being belittled and verbally abused by Sergeant Avila, he was subdued with tasers, batons, and two shots from a tear gas gun during the cell extractions until he passed out twice. The official incident report claimed that his head injuries were from hitting his head on the toilet, which was 'confirmed' by the Lieutenant present. Testimony from Sergeant Cox and further questioning made the story clear that there was no possible justification for the treatment of Mr. Castillo.[38]

SHUs are also utilized to suppress dissident activity within the general population. This dissidence includes denouncing prison conditions, assisting other prisoners with habeas corpus appeals, and initiating legal action against the correctional administration.[38] Researchers and lawyers in similar cases note the struggle to get accurate information as prisoners are usually twisted into corrupt models of silence to prevent the incrimination of the staff and facilities.

While both of these cases are prison abuse taken to the extreme, the actions and choices display a system without the proper checks and regulations in place to maintain and uphold civil

liberties and fundamental human rights. Even though the system currently lacks accessible alternatives, opting for the most extreme punishment and torture as a means to the end is unjust.

Vulnerable populations

Beyond the statistics and numbers, these inmates are people trying to survive in a system that continually works against them. Former incarceree Megan Sweeney said, “You're in a grave and you're trying to live. That's how to best describe it: trying to live in a grave. You're trying to live 'cause you're not dead yet, but nobody hears you when you call out, 'Hey, I'm alive!”[67] The pressures of institutionalization affect all inmates, but some groups have greater vulnerabilities to the harsh transitions from a free society to confinement and back out again. This includes individuals of racial and ethnic minorities, those in the LGBTQIA+ community, those with preexisting developmental disabilities and psychological disorders, and juveniles.

It is not possible to fully explore the multifaceted and ingrained systemic oppression that disproportionately affects racial and ethnic minorities within the U.S. judicial system within this paper. It is still critical, however, to examine how prisons and solitary confinement function to perpetuate racism. Ruth Wilson Gilmore, abolitionist prison scholar and professor of geography at City University of New York, defines racism as “the state-sanctioned or extralegal production and exploitation of group-differentiated vulnerability to premature death.”[7] Supporting the reality that mass incarceration is among the most significant social determinants of health for Black males, *actually* lowering the life expectancy of the entire sub-population.[65]

A 2021 study of prison populations in Pennsylvania prisons discovered that 11% of black men born between 1986 and 1989 were held in SHUs by the age of 32.[54] Regardless of actual conduct, correction officials are more likely to notice minorities' disciplinary infractions than those of white people. Further, many judge a black offender as a greater threat than a white offender, contributing to more citations being issued to black offenders. In an interview, a young black inmate stated after returning from solitary, he became a vulnerable target of many instances of gang rape. When asked why he received no assistance from staff, he remarked that “In general population, there is only one CO for over 200 prisoners. Guys [prisoners] are all wearing uniforms. The COs say ‘Black guys, they all look alike.”[54]

According to the National Inmate Survey, LGBTQIA+ individuals are jailed at a rate that is more than three times that of the general adult population and are more likely to be put into solitary confinement.[30] A survey completed by Black & Pink National, a prison abolitionist and LGBTQIA+ organization, found that 85% of 1,118 LGBTQIA+ incarcerated people reported spending some amount of time within solitary confinement. The incidence rate for queer black, indigenous and people of color (BIPOC) is twice that of their queer white counterparts.[30] An inmate's sexuality is easily exploited under the name of ‘protecting’ queer individuals, using protective custody segregation to reduce the number of offenses and need for prison staff involvement. Transgender men and women face even greater levels of stigmatization and abuse than other LGBTQIA+ people. An analysis of the transgender prison population reveals 4,890

transgender people locked up in state prisons, with only 15 confirmed cases in which the person has been placed in a prison that matches their gender identity. In 2021, California passed Senate Bill 132 in 2021, allowing incarcerated transgender, non-binary, and intersex people to "request to be housed and searched in a manner consistent with their gender identity." No other state has such a statute in place.[27] In addition to higher rates of administrative isolation, trans people are often denied health care and hormonal treatments, which increases their risk of psychological disorders as they are never treated in a manner consistent with their gender identification. Trans inmates also face exceptionally high rates of sexual and physical harassment and assault.[30]

Individuals placed within the Prison Industrial Complex and, more acutely, in solitary confinement undergo rapid psychological change and risk of developing physical, psychological, and mental disorders. According to the National Alliance on Mental Illness, 21 percent of U.S. adults, or 52.9 million people, experienced mental illness in 2020. For incarcerated people, those rates are much higher; the American Psychological Association reports that "64 percent of jail inmates, 54 percent of state prisoners, and 45 percent of federal prisoners" have reported mental health concern.[11] Often these incarcerees have diagnosed or undiagnosed challenges in their perception of reality. Schizophrenia and similar disorders affect a person's ability to perceive reality, interact appropriately, control one's emotional and behavioral reactions, and simply learn and comprehend. All of these factors greatly contribute to a predisposition toward being placed in solitary confinement, which only greatly exacerbates the underlying psychological disability. They fall into a vicious cycle where their mental illness takes control, frequently resulting in hostile and aggressive behavior that leads to breaking prison rules and cyclical placement in SHUs.[24]

Racial disparities persist through mental health care. 40% of black and 26% of Latino populations are placed in confinement before being diagnosed or seen by a health care provider, compared to 9% of whites.[31] 20% of the prison population has been diagnosed with a "severe" mental disorder. Adequate psychiatric evaluation and treatment are typically not available in control units such as the SHU.[4] Furthermore, the harshness and extreme deprivation they encounter in solitary confinement are the antithesis of the innocuous and socially supportive environment mental health professionals strive to establish in therapeutic settings.[24]

Just as the United States imprisons more people than any other country in the world, it also incarcerates more youth. Juveniles are especially susceptible to neurobiological degradation that subverts positive brain development, as the brain is still developing until the late 20s, and the prefrontal cortex is one of the last structure to mature fully.[57] The maladaptive conditions of isolation warp the brain's "cognitive behavior, personality expression, decision making, and moderating social behaviour."[8,44] Solitary confinement raises the incidence of self-harm, psychosis, and suicide among youth. One study found a 22-26% increase in the probability of subsequent incarceration once they have reached adulthood.[44] Rather than take the lives away from these vulnerable population, the U.S. must shift away from punitive segregation.

Barriers to Reentry

The justice system stands on the principle that incarceration will provide the ‘much needed’ framework in the criminal's life to prevent the commitment of a future crime. However, the prison system does allocate adequate funding, staffing, or resources to reach this goal and places little productive change and rehabilitation. In a setting where staff use abuse and cruelty to control and dehumanize them, it is unreasonable to expect prisoners to return to a highly stigmatized free society ‘new and improved.’ Rather, the trauma of surviving prison greatly hinders their reintegration into the outside world.

Prison is a highly particular environment requiring individuals to undergo rapid changes into their personalities and moment-to-moment behaviors to survive, creating a reality that is nothing short of dehumanizing. The concept of "institutionalization" or “prisonization” refers to the process through which convicts are influenced and altered by their institutional settings, in this case, their punitive environment. Institutionalization is a part of every inmate's journey, not just those in more restrictive environments like solitary, and results in the “incorporation of the norms of prison life into one’s habits of thinking, feeling, and acting.”[24] These changes can be vital for surviving pathological prison conditions but become counterproductive in almost any other circumstances. While institutionalization is gradual, subtle, and potentially reversible, under extreme but hardly rare circumstances, it becomes “chronic and deeply internalized.”[24] The damage of institutionalization is often time-dependent and especially damaging to youth and the developing brain as it establishes patterns and behaviors that will be present in adulthood.

When prisoners are released into free society, the ‘pains of imprisonment’ and the effects of institutionalization become clear. In prison, inmates must adapt to losing identity and autonomy. Once incarcerated behaviors are internalized, the loss of independence and their submission to an absolute authority promotes dependency on the system and powerlessness when it comes to self-determination and decision-making. Some individuals become so dependent on external restrictions that they gradually lose the capacity to rely on their own internal order and self-imposed personal boundaries to steer and manage their conduct. They may find themselves unable to do tasks independently or doing things that are ultimately detrimental or destructive to themselves.[25]

Prisons and supermax facilities in particular pose clear and ever-present dangers to the safety of inmates. This requires inmates to become hypervigilant against possible and probable threats by those who want to exploit any signs of weakness or vulnerability. It is not hard to see how chronic exposure results in high levels of distrust and paranoia. Masking and projecting an image wholly different from the personality the individual enters incarceration with is especially evident in male prisons where hypermasculinity is ingrained into the prison culture. People guided by fear tend to be more violent, dominating, and defensive or alternatively turn inward and become emotionally stunted. Social avoidance is a common strategy among inmates who are unable or unwilling to protect themselves physically. These ‘skills’ and adaptations are not easily

lost. In society, these traits are proven to be maladaptive and abusive, straining relationships and interactions and significantly increases the likelihood of re-incarceration.

The lack of rehabilitation and the increasing prevalence of understaffing has eliminated some of the moral and ethical standards which should be afforded to inmates. This is seen most clearly in cases of negligence and mistreatment by correctional officers, whose role supposedly ensures the prison's safety and security. Guards serve as a "pro-social" role model for inmates by demonstrating proper conduct and holding them accountable for their actions when necessary.[10] The significant understaffing, matched with the pressures of overcrowding, have led to a shift in the concept of what being a correctional officer entails. Faced with a lack of resources, the available officers depend on physical violence, cruelty and abuse which provides less care and a less stable structure.[69] This has created an even larger power imbalance between staff and inmates, resulting in more cases of prison brutality, psychological disabilities, and reduced inmate safety. With fewer numbers, staff are much less likely to get involved in disturbances between inmates and are becoming increasingly willing to employ extreme forms of discipline like solitary confinement or physical and verbal abuse. The justification or minimum requirements for implementing segregation have become muddled and easily manipulated. General prison culture is degraded by a decrease of rehabilitative programs in the general population. These programs, mental health services, visitation rights, and educational and occupational resources do not exist in more restrictive environments like the SHU.[58] All of these dysfunctional interactions further degrade a prisoner's ability to reintegrate into society in a healthy manner.

Finally, when returning to a free world community, former incarcerees face an inordinate amount of stigmatization and prejudice as 'felons.' Without a reasonable period of transition, individuals must conform to the standards of society from which they have been excluded. They are constantly faced with harmful rhetoric that permanently labels and identifies them as 'ex-cons,' which dehumanizes them, creates a bridge between interpersonal relationships, and fosters further condemnation. The public's perception favors intolerant policies that bar them from access to quality employment opportunities, parental rights, and voting; they cannot apply for public benefits, public housing, and student loans.[37]

Additionally, inmates are frequently released back into unstable and degenerative situations that increase the probability of reincarceration, especially for non-whites and low-income citizens. They often return to impoverished areas with limited opportunities to find employment and support themselves and their families. Police presence in these locations is often proportionally larger, and conviction rates for "petty" crimes are higher, with penalties being larger than for those without previous convictions. Family support is varied. Spouses may have moved on. Children may be distant or mistrustful. Life on "the outside" is often isolating and disorienting, leading to mental health challenges and poor judgment and decision-making.

Reintegration is even more difficult for inmates who spent time in solitary confinement. In North Carolina, between 2000 and 2015, prisoners who spent time in solitary confinement were 24% more likely to die in the first twelve months after release than prisoners who did not

spend time in solitary confinement. They were at increased risk of suicide, homicide, and substance overdose.[65] They were also three times as likely to display symptoms of post-traumatic stress disorder (PTSD).[65] The PIC abandons its inhabitants without a single net to catch them.

Policy and Reform,

The United States uses solitary confinement more frequently and for longer lengths of time than any other country in the world.[60] Increasingly, the very architecture of prisons is designed to isolate and control incarcerees. The failure of the judicial system to protect and ensure the safety and health of its inhabitants is made evident in the abuse of administrative segregation. Disciplinary segregation, as discussed previously, requires correctional officers to go through a hearing where they submit evidence of a rule breach to an internal board or committee and provide the prisoner a chance to defend themselves.[25] Since states are not required to publicly disclose how many people are in solitary confinement in their prisons, many prisons exploit the more unregulated administrative segregation, which only requires that the inmate *may* pose a threat to themselves, others, and the prison. As demonstrated by Pelican Bay, inmates are punished for and suppressed from contesting their treatment.

The Restricting the Use of Solitary Confinement Act, currently introduced to the House of Representatives, seeks to address policy changes in the regulation of punitive segregation. Remarkably, most of the bill reiterates policies currently in place that are clearly not being followed or upheld. Though required daily, inmates' mental and physical health are rarely evaluated by prison administrative and medical staff during their time in solitary.[13] Ultimately, that policy is only as good as the result. These policies have been routinely ignored without consequence for decades, highlighting the lack of accountability within the prison system and the clear absence of respect for one's common humanity.

The rhetoric of solitary confinement policies often leaves loopholes and workarounds for prison administrators to manipulate. For example, the new act prevents confinement for more than 15 consecutive days. This simply allows an opportunity for a single day of release for every 15 days of consecutive isolation. Opening opportunities to extend inmates' stay with inconsistent entry into solitary units.[20] The policy states that solitary confinement should only be implemented when promoting alternative actions if and only if “a less restrictive intervention would be insufficient to reduce this risk.[65,20] As is well established, given funding and human resources shortages, prisons seldom take the time to establish alternative methods of intervention.[20,24]

However, the bill does establish new precedents that help protect inmates. It can be very difficult for inmates placed under administrative segregation to get access to legal assistance or a public hearing. Under the new legislation, inmates will be afforded the right to a hearing within 72 hours and review every 15 days after placement.[20]

One major change involves the transition from solitary confinement into free society. Currently, inmates are not given an adjustment period or resources to facilitate a safe release. Due to deep institutionalization, inmates should never be released immediately after spending time in solitary confinement. If passed, prisons will be required to release inmates in the general population 180 days prior to release barring disciplinary action.[20]

To help prevent the exacerbations of mental health symptoms, this congressional policy states that in the 12 hours preceding entry into solitary confinement, inmates should receive comprehensive medical and mental health examinations conducted by a clinician and be reevaluated within 48 hours of isolation.[20] It also establishes barriers to isolation for other vulnerable populations, but always barring disciplinary action or the final decision of the prison administrator. Including those 25 years or younger or 65 years or older, individuals with developmental disabilities and chronic illnesses, and pregnant persons with uteruses.[20] Unfortunately the policy is limited in that all of the above can be precluded by disciplinary action or the final decision of the prison administration.

Only time will tell whether or not this bill will create lasting change, but the battle to end this gross abuse of human rights is not over. Reform is required at the state and federal levels. Solitary confinement should always be considered the last resort. The costs to the individual are too great, it stands against the fundamental principle of rehabilitation, places our nation well outside international standards of incarceration, and, in the end, is far more expensive to facilitate and leads to higher rates of reincarnation, only taxing the system further. It does not solve the judicial system's inherent flaws, overcrowding, or violence.

Conclusion

The Prison Industrial Complex has been fraught with a long history of abuse and mistreatment of incarcerees since its inception. Today, it continues to be a battleground for human rights in America. People are unjustly incarcerated every day based on their skin color or economic status, and millions remain incarcerated despite the fact that their penalty is for a crime that no longer exists in some or all states (i.e., marijuana possession). Solitary confinement has become a dumping ground for those the system deems not worthy of rehabilitation, those unfortunate to have been placed in a complex that is already overcrowded, and a disproportionate number of people in marginalized communities.

Prolonged isolation diminishes one’s image of common humanity, perception of personal identity, and social well-being. It affects one's ability to think and process information accurately, increases pain responses, negatively affects multiple areas of mental and physical health, dramatically worsens underlying mental health conditions, and affects a person’s ability to relate to others in the future, in some cases permanently. It places barriers in the way of receiving necessary medical and mental health care and severely increases the likelihood of toxic, erratic, and violent interactions and outbursts. Many would describe it as a form of torture. Given the suicide rates of those in isolation, this is not an exaggeration.

Prisons apply a utilitarian deterrence model where the sole purpose of punishment is to dissuade people from committing crimes by making them fearful of the consequences or by protecting society from the offender.[61] However, the influence of mass imprisonment on crime is negligible to nonexistent. Rather, increasing imprisonment can cause crime rates to rise.[64] Segregation is often used to prevent the creation of relationships and coalitions motivated and joined in the common struggle for change in opposition to the system designed to put them there.[23]

Clearly something has to change. The United States' current political framework continues to emphasize a punitive, hypocritical, and racially segregated approach to criminal justice. It is unclear how best to alter this trajectory. As long as society and the state responds to violence, harm, crime, and abuse with further violence and abuse, as with the prison system, we are only exacerbating and prolonging our society's ills.[45] The foundation of transformative justice is preventing institutions like the PIC by focusing on the conditions and structures that encourage crime, violence, and subsequent incarceration to occur. The solution is fewer prisoners, a focus on socialization and rehabilitation within the system, and a total movement away from isolation through solitary confinement. As Ruth Wilson Gilmore says, the best way to deal with exploitation and racism is "to fight for water, housing, and health."[7] Only when we fight against the root causes of incarceration will this country be able to move into a new age that cares for all of its people.

APPENDIX A: Presentation of Marginalized Bodies: A System(at)ic Exploration of Humanity panel on May 20th, 2023

29-year-old Joshua McClemore "died in the summer of 2021 from dehydration and malnutrition [having been] left naked in solitary confinement for three weeks with no medical attention." McLemore, who suffered from schizophrenia, "was left in a small, windowless cell for 20 days straight in Jackson county (Indiana) jail." His cell had no bed or toilet facilities and had bright fluorescent lights on 24 hours per day. Video from the entirety of his stay shows McLemore in a state of psychosis, "rolling in his own waste" and "becoming clearly emaciated."[35] He was served meals through a slot in the door but was rarely witnessed eating "He had extended human interactions on only four occasions – when guards used intense force and restraint devices to drag him out to clean the cell or give him a shower."He lost 45 pounds in three weeks but never saw a physician. On the 20th day of his stay he was found poorly responsive, but medical staff was not called for over 2 hours He was taken to a hospital where he was found to suffer from severe dehydration, insufficient oxygen in his body tissues, kidney failure, impaired brain function and other catastrophic health problems. He was airlifted to an Ohio hospital, where he became comatose, before he was declared dead on August 10th.

McLemore was incarcerated after pulling a nurse's hair during an inpatient stay for acute psychosis. He should have never been there in the first place.

In spite of the fact that other than the death penalty, there is no harsher punishment in the US judicial system than solitary confinement, 80,000 individuals spend time in isolation units every day. The media and federal release of information on only high-profile (and often violent) inmates placed in solitary confinement has created a public perception that solitary confinement is only used for what would be considered the 'worst of the worst' in terms of criminal activity and violence. Today, one in five prisoners out of the entire 1.9 million people in prisons and jails spend some amount of time in solitary confinement.

The Covid-19 pandemic has given us all an inside look into what a fraction of the harm inmates received during maladaptive isolation. Remarkably, there has been a greater interest in the studies and research on the physical and mental impacts of isolation from the pandemic than in its use in our justice system. I know we can all remember what it felt like to be so disconnected from our families and friends. I personally struggled with my mental health during the pandemic, but mostly, I lost motivation for school, taking care of myself, and existing beyond just going through the motions. The pandemic is affecting me even today, I still struggle to spend long periods of time in large groups or even with close friends that I used to enjoy before becoming so used to being alone. So as you hear this speech today, I push you to remember the hardest moments of social distancing, and you might be able to understand a small part of what it is like to be placed in punitive isolation.

In the end, solitary confinement has become a dumping ground for those the system deems not worthy of rehabilitation, those unfortunate to have been placed in a complex that is already overcrowded, and a disproportionate number of people in marginalized communities.

I want to start with a brief timeline of the history of solitary confinement and by defining a few important terms. The first recorded use of solitary confinement in the United States began in the early 1830s at the Eastern State Penitentiary in Philadelphia, a facility pioneered by

Quaker ideologies. Prisoners were given silence, solitude, and typically a Bible to reflect and pay penitence for their crimes. In 1890, After 45 days in solitary, an inmate went to the Supreme Court claiming that the time in isolation was not befitting of the Eighth Amendment clause of no cruel or unusual punishment. It signaled a major reduction in solitary confinement use. In the 1930s, prisons began using solitary confinement again as a method of punishment, despite lacking any significant evidence of the efficacy of the practice's rehabilitative qualities. The establishment of Alcatraz Federal Prison in 1934 signaled a shift away from a legal system and national culture that favored rehabilitation toward one that concentrated on punishing people they deemed unfit to function in regular society. The first super-maximum security prison was created in 1983 at the United States Penitentiary Marion in Illinois after the murder of two prison guards. Today more than 40 states have established long-term super-maximum facilities.

Solitary confinement goes by many terms, but for the purpose of this speech, I will keep to SC or isolation/segregation units. There are two many types of punitive segregation- disciplinary and administrative segregation. At its simplest, disciplinary segregation consists of isolation for a short but predetermined quantity of time after a legal proceeding. Administrative segregation, however, is much more complex and does not share the same set of regulations or standard protocol as disciplinary. So Prison staff can 'justify' and manipulate confinement if the inmate's isolation, in theory, *may* remove "a serious threat to life, property, self, staff or other inmates, or to the security or orderly running of the institution." Since states are not required to publicly disclose how many people are in solitary confinement, many prisons exploit the more unregulated administrative segregation even for simple actions like not returning a food tray fast enough.

The United States uses solitary confinement more frequently and for longer lengths of time than any other country in the world. According to the UN Standard Minimum Rules for the Treatment of Prisoners, solitary confinement is the "confinement of prisoners for 22 hours or more a day without meaningful human contact." Most isolation units are 60 to 80 square feet concrete rooms "with a cot, a toilet, a sink, a narrow slit for a window," and occasionally a small desk. Inmates will spend, on average, 23 hours in their cells every day. They are given 1 hour to spend either in a larger isolated room for limited exercise and recreation or to shower. In high-security prisons, inmates remain cuffed and restrained at all times when outside their cells.

The United Nations Special Rapporteur on Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment stated that solitary confinement under any conditions over fifteen days should be considered torture. In the US, it is uncommon for inmates to spend <u>less than</u> 15 days in isolation. One study of 50,000 solitary inmates found that 29% of inmates were held in isolation units between 1 and 3 months and 25% for a year or more.

Rather than fulfilling its goals, solitary confinement exacerbates the problems it was created to alleviate. For one, most research indicates that time spent in isolation raises post-prison recidivism rates or the propensity of a convicted criminal to re-offend. Today these inmates face considerably more barriers to reentry into free society and lack the proper support to give them a fighting chance at success. Moreover, studies have shown that the adoption of

SHUs into the U.S. prison system has had counterproductive effects on the total incidence rate of assaults on staff and inmates.

With that established, I will now focus on how existing in these structures changes the way people view their humanity, individuality, and place in society. Humans are social creatures that require connections, relationships, and interaction to survive and *meaningful* contact to thrive. This includes “learning by social observation,”; “navigating complex social hierarchies, social norms, and cultural developments,”; and “orchestrating relationships, ranging from pair bonds and families to friends. Positive social experiences influence how we view ourselves and, as a result, significantly impact how we perceive our humanity, our worth, and our ability to endure suffering or failure. It “Deprives persons of the opportunity to ground their thoughts and emotions in a meaningful social context” - unrestrained by bars or glass to determine the appropriateness of their feelings and behaviors. When we abandon or cut someone out from the community, we are stripping them of their humanity and our own. It takes a network of interconnected commitments throughout all periods of life to create and sustain social personhood, but at the same time, it takes a communal network of exclusions, harm, and negligence to decimate that personhood. I have only lived for a short 22 years, but in my personal opinion, loneliness, or the perception of loneliness, is one of the most physically and mentally debilitating experiences we face as humans.

One of the primary ways humans express compassion, connectedness, and intimacy is through physical touch. In primates, the nurturing act of social grooming is equivalent to stroking, caressing, touching, and hugging in humans.

Since touch receptors travel much faster from the point of stimulus to the central nervous system than pain receptor signals, the touch receptor signal is essentially able to override the pain receptor signal alleviating pain perception. Without positive human touch, people in isolation have increased pain intensity.

Loneliness or perceived isolation can have consequences on physical health. Research indicates high levels of vascular diseases, high blood sugar, inflammation, muscle atrophy, and impaired immune system functions in inmates.

The monotony and inactivity of confinement exacerbate ailments in isolating environments. Physical pain is severely aggravated with little else to focus on when there is no positive sensory information to lessen the discomfort. One Washington State Department of Corrections prisoner recounts the feeling of obsessiveness over his dermatitis, saying, “minor things become huge when you’re in segregation.” His untreated skin rash quickly became scabs bleeding down his head. Society takes for granted the accessibility to casually treat our own ailments but ignores the utter infantilization of inmates when they cannot even choose whether or not to give themselves an Advil when their head hurts.

The trauma of surviving prison greatly hinders their reintegration into the outside world. Prison is a highly particular environment requiring individuals to undergo rapid changes in their personalities and moment-to-moment behaviors to survive. The concept of "institutionalization" or “prisonization” refers to the dehumanizing process through which convicts are influenced and

altered by their institutional settings. Institutionalization is a part of every inmate's journey and results in the "incorporation of the norms of prison life into one's habits of thinking, feeling, and acting." These changes are vital for surviving pathological prison conditions but become counterproductive in almost any other circumstances. While institutionalization is gradual, subtle, and potentially reversible, under extreme but hardly rare circumstances, it becomes "chronic and deeply internalized." Researchers found that brain regions involved in emotional control, attention and decision making showed a decrease in size and volume and signaling activity after periods of isolation. The damage of institutionalization is often time-dependent and especially damaging to youth and the developing brain as it establishes patterns and behaviors that will be present in adulthood.

Prison requires inmates to become hypervigilant against possible and probable threats by those who want to exploit any signs of weakness or vulnerability. People guided by fear tend to be more violent, dominating, and defensive or alternatively turn inward and become emotionally stunted. Social avoidance is a common strategy among inmates who are unable or unwilling to protect themselves physically. These 'skills' and adaptations are not easily lost. Back in society, these traits are proven to be maladaptive and abusive, straining relationships and interactions.

In prison, inmates have to adapt to a loss of identity and autonomy. The loss of independence and their submission to an absolute authority promotes dependency on the system and powerlessness when it comes to self-determination and decision-making. Some individuals become so dependent on external restrictions that they gradually lose the capacity to rely on their own internal order and self-imposed personal boundaries to steer and manage their conduct. They may find themselves unable to do tasks independently or doing things that are ultimately detrimental or destructive to themselves. The most common cause of death in the prison system is suicide. Half of those suicides are represented by individuals placed in solitary.

The pressures of institutionalization affect all inmates, but some groups have greater vulnerabilities to the harsh transitions from a free society to confinement and back out again. This includes individuals of racial and ethnic minorities, those in the LGBTQIA+ community, those with preexisting developmental disabilities and psychological disorders, and juveniles. Mass incarceration is among the most significant social determinants of health for Black males, *actually* lowering the life expectancy of the entire sub-population.

Individuals with mental illnesses fall into a vicious cycle where their illness takes control, frequently resulting in hostile and aggressive behavior that leads to breaking prison rules and cyclical placement in isolation units

An inmate's sexuality is easily exploited under the name of 'protecting' queer individuals, using protective custody segregation to reduce the number of offenses and the need for prison staff involvement.

Finally, when returning to a free world community, former incarcerees face an inordinate amount of stigmatization and prejudice as 'felons.' Without a reasonable period of transition, individuals must conform to the standards of society from which they have been excluded. They are constantly faced with harmful rhetoric that permanently labels and identifies them as 'ex-

cons,' which dehumanizes them, creates a bridge between interpersonal relationships, and fosters further condemnation. The public's perception favors intolerant policies that bar them from access to quality employment opportunities, parental rights, and voting and they cannot apply for public benefits, public housing, and student loans.

Reintegration is even more difficult for inmates who spend time in solitary confinement. In North Carolina, between 2000 and 2015, prisoners who spent time in solitary confinement were 24% more likely to die in the first twelve months after release than prisoners who did not. Additionally, inmates are frequently released back into unstable and degenerative situations that increase the probability of reincarceration, especially for non-whites and low-income citizens. They often return to impoverished areas where there are limited opportunities to find employment and support themselves and their families.

As social creatures, human mental and physical well-being depends on meaningful social interactions absent in segregation units. As it currently stands, vulnerable populations, including racial minorities, LGBTQIA+ individuals, and those with developmental disabilities or psychological disorders, are at risk of irrevocable harm and abuse within these facilities from staff as well as other inmates. The overwhelming evidence of the inefficacy of solitary confinement as a method to solve the institutionally created issue of mass incarceration further punctuates the need for policy reform and systematic change against the root causes of exploitation and punitive segregation. In the end, solitary confinement is the U.S.'s inferior and failed solution to a self-inflicted problem.

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