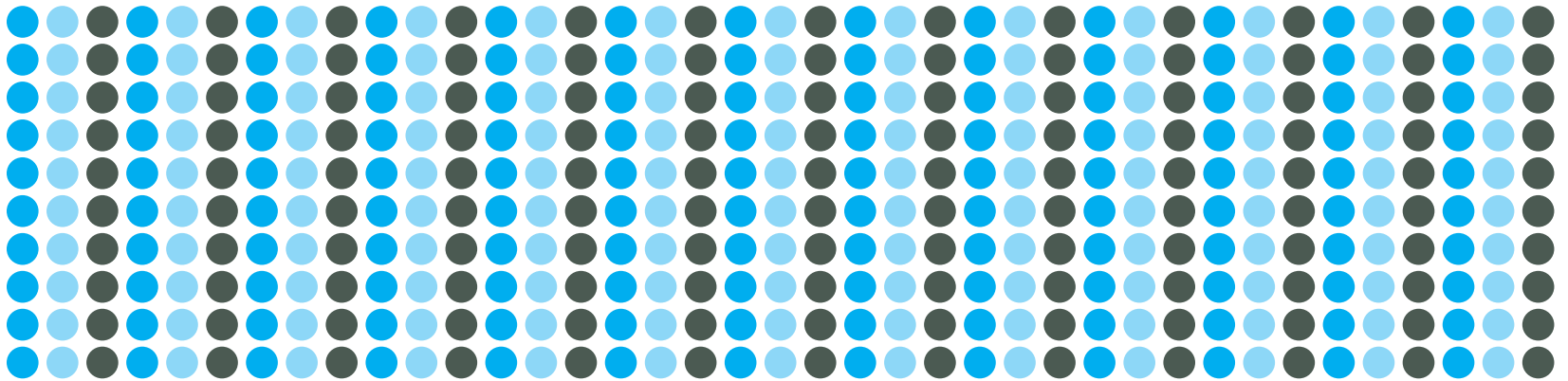


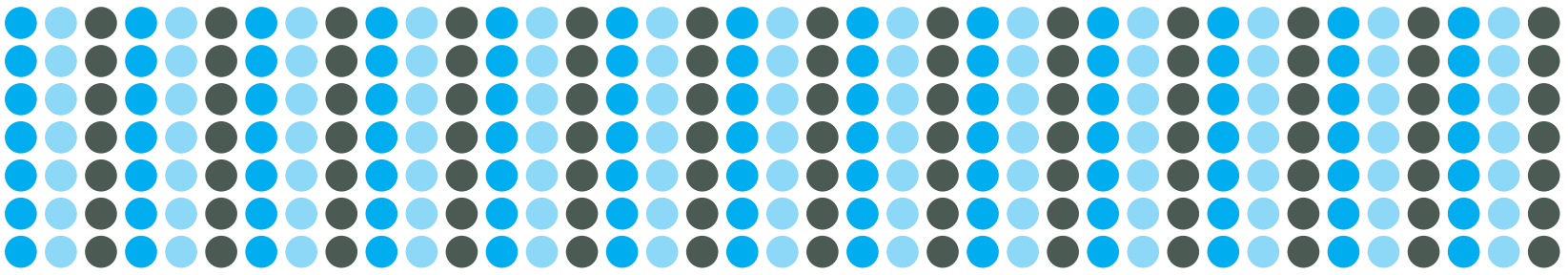
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Elements, the undergraduate research journal of Boston College, showcases the varied research endeavors of fellow undergraduates to the greater academic community. By fostering intellectual curiosity and discussion, the journal strengthens and affirms the community of undergraduate students at Boston College.

Elements

Fall 2015





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QUESTIONS & CONTRIBUTIONS

If you have any questions, please contact the journal at elements@bc.edu. All submissions can be sent to elements.submissions@gmail.com. Visit our website at www.bc.edu/elements for updates and further information.

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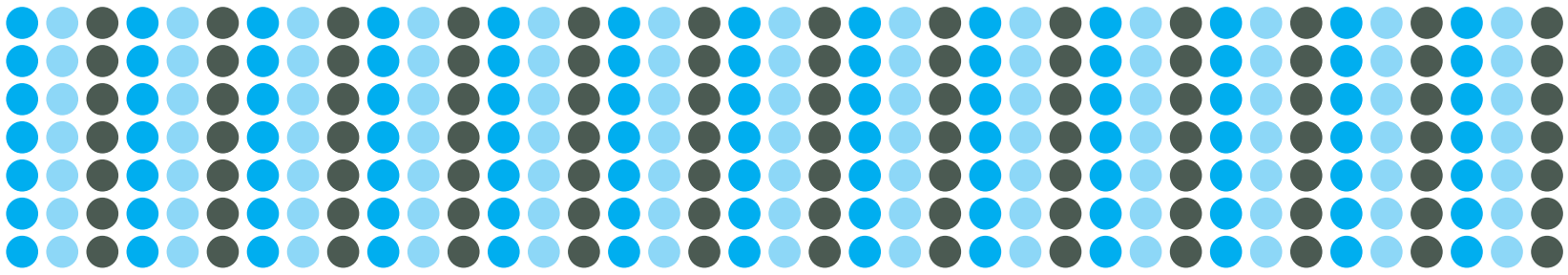
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EDITOR'S NOTE

Dear Readers,

We live in a world of constant change, where an unyielding flow of innovation forces existing systems to adapt, often in the face of significant resistance. How do we measure the impact of new developments in technology, business, politics, and scholarly methodology? Is the process of transforming from old to new unequivocally good? Throughout history, these questions have arisen whenever a period of rapid shifts approaches. However, they take on greater importance in our 21st century context, characterized by changes in all arenas at unprecedented speed. Simultaneous revolutions in multiple facets of human life challenge our understanding of what it means to live in relation to one another. This issue of *Elements* explores the implications of disruptive innovation in a variety of contexts, in an attempt to reconcile the vestiges of the past with the realities of the present.

We seek to present the process of 21st century evolution as it unfolds in diverse arenas. “Uber Takes the Passing Lane,” our cover article, provides an in-depth analysis of a disruptive innovation that increasingly permeates daily life for urban residents. Author Allison Schneider examines the ripple effect of Uber’s arrival in the taxi-livery market and its potential consequences at the macro and micro levels, from shifts in regulatory structures to new frameworks for employee-employer relations. Doyle Calhoun invites linguistic scholars to consider renewed theoretical frameworks through his efforts to decode “A Grammar of Punctuation in Poetry.” Allyson Tank draws us to “A Biological Arms Race” in the sciences that could shed new light on our understanding of lentiviral resistance. In contrast to these examples of transformations occurring in our cultural moment, Alec Walker offers a historical perspective on the social forces that provide an impetus for new ideas in “Dissent in the Wirtschaftswunder,” an exploration of the 1968 German student movements. Together, this set of articles reminds us that change is a constant in human life, a force that touches us in uncountable ways.

Even as disruptive innovation transforms some fields beyond recognition, lingering remnants of obsolete structures inhibit essential changes in others. Catherine Larrabee describes how such “Inherited Injustice” allows the

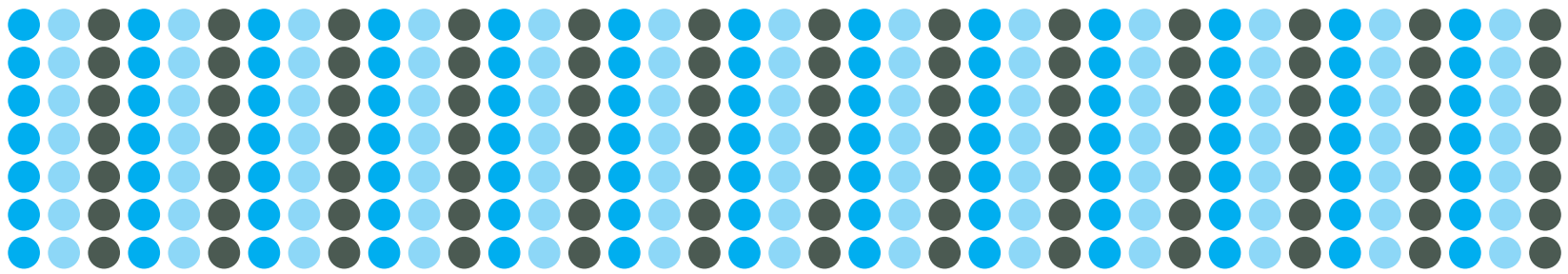
vertical transmission of HIV/AIDS to endure in India. In “Latino Masculinity,” Maria Vazquez brings Larrabee’s concern for social stigmas stateside as she attempts to dissect the influence of cultural stereotypes on college completion rates among first-generation Latinos. Featured author Olivia McCaffrey goes beyond the symptoms of stagnation to root causes in her analysis of voters who are “Neither Red Nor Blue,” the Massachusetts voters for whom the big tent, two-party system no longer suffices as an expression of political ideology. Through their examination of social systems struggling to adapt to 21st century circumstances, these three pieces highlight the risks inherent to resisting change.

This issue of *Elements* marks the integration of disruptive innovations in our own publication process. We are now operating under a Creative Commons license, meaning that articles published in *Elements* are non-exclusive and may be shared and cited, with attribution, by readers worldwide. Through a partnership with Boston College University Libraries, *Elements* debuted a live, open access e-scholarship website this semester, which houses an archive of all past issues of the journal and will serve as a hub for our future publications. In combination with our indexing with the Library of Congress as a print and digital journal, these advances represent a new phase in *Elements*’ maturation as a publication. As we close our first decade, we continue the traditions of academic excellence, intellectual diversity, and integrity initiated by our founding members and look ahead to the digital future of scholarship at the university. I invite you to explore our print edition, a legacy to which we remain devoted, and then to browse our digital book, an innovation we welcome. Happy reading!

Best,

MARISSA MARANDOLA

[Editor in Chief](#)



CONTENTS

II UBER TAKES THE PASSING LANE: DISRUPTIVE COMPETITION AND TAXI-LIVERY SERVICE REGULATIONS

Allison Schneider

Reflecting on how municipal regulatory structures thwart disruptive competition in the ride-sharing market.

24 A GRAMMAR OF PUNCTUATION IN POETRY: MODERN COMPUTATIONAL LINGUISTIC PERSPECTIVES

Doyle Calhoun

Decoding the language of punctuation and its relevance to literary studies and textual criticism.

31 LATINO MASCULINITY: UNDERLYING FACTORS IN COLLEGE PERSISTENCE LEVELS

Maria Vazquez

Dissecting the intersection between Latino culture and college completion rates among first-generation males.

42 DISSENT IN THE *WIRTSCHAFTSWUNDER*: HISTORICAL MEMORY AND THE GERMAN STUDENT MOVEMENT

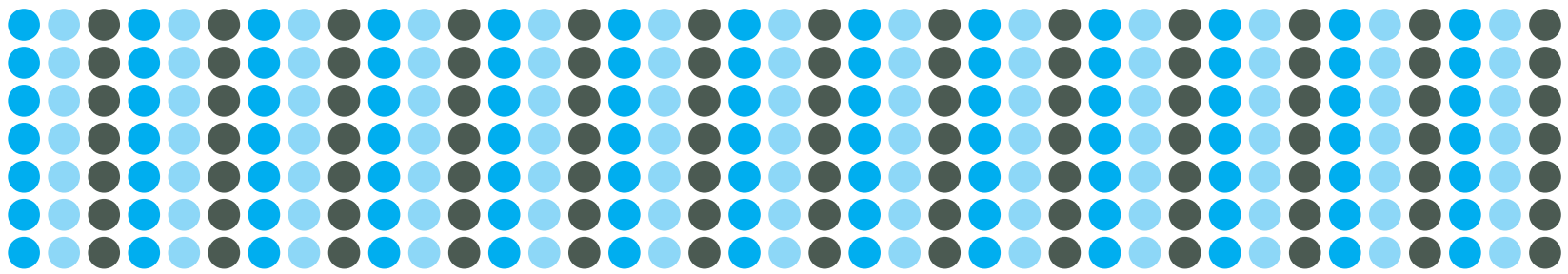
Alec Walker

Examining the 1968 youth backlash against West Germany's ambiguous relationship with its fascist heritage.

49 A BIOLOGICAL "ARMS RACE": APOBEC3F DIVERSITY AND ITS INFLUENCE ON LENTIVIRAL RESISTANCE

Allyson Tank

Investigating the genetic diversity of Old World primates and its implications for selective pressures on host proteins.



64 CARTOGRAPHERS IN THE CARIBBEAN:
ECONOMICS AND MAPPING IN THE COLONIAL NEW WORLD

Benjamin Shapiro

Charting European perceptions of their Atlantic holdings through the Jefferys *West India Atlas*.

72 PERFORMING REDEMPTION:
METZIAN THEOLOGY IN THE ART OF KENDRICK LAMAR

Evan Goldstein

Positioning the harsh reality of Lamar's *good kid, m.A.A.d city* within Johann Baptist Metz' theory of salvation.

82 NEITHER RED NOR BLUE:
THE INFLUENCE OF INDEPENDENT VOTERS IN MASSACHUSETTS

Olivia McCaffrey

Exploring the increase in significance of unaffiliated voters in the Commonwealth of Massachusetts.

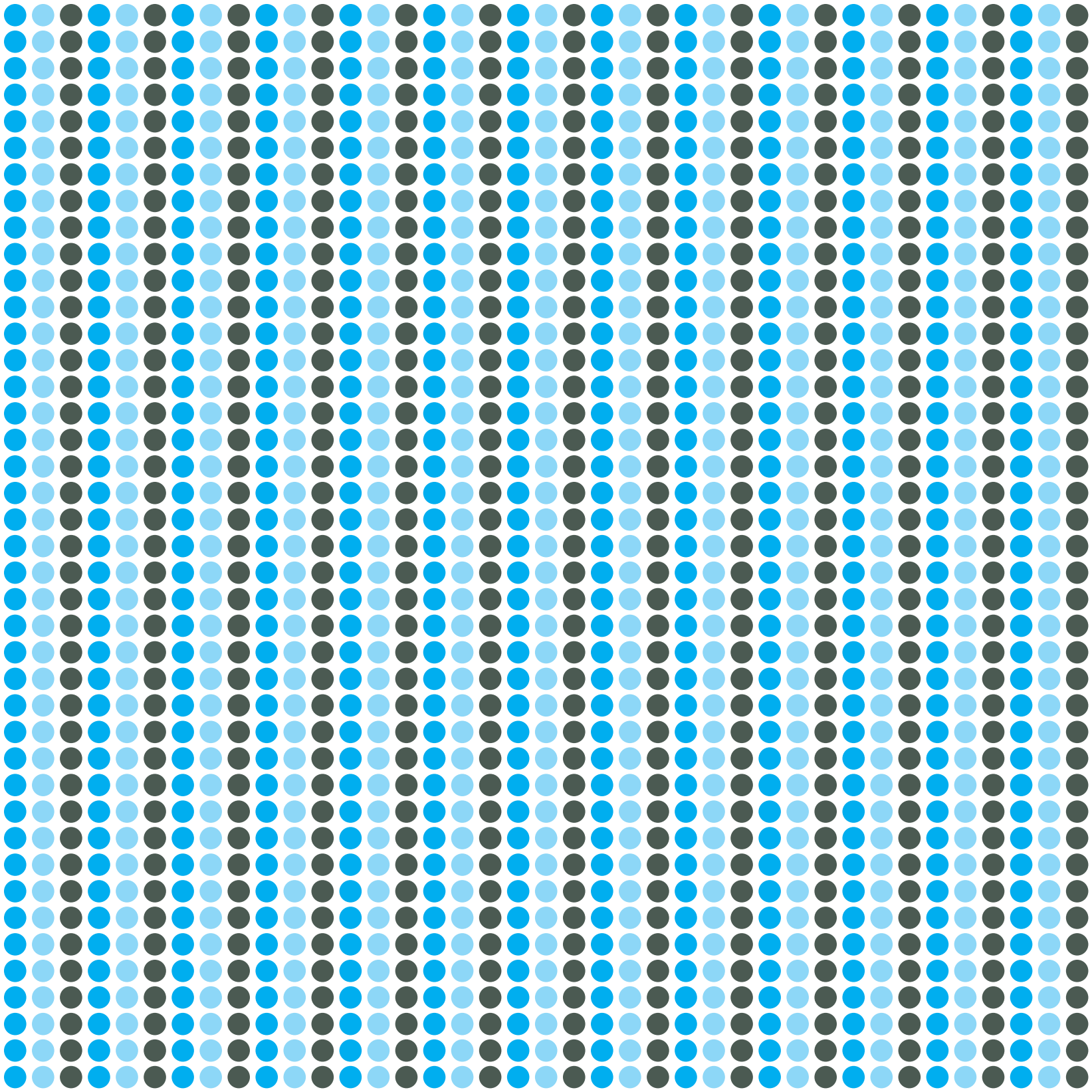
91 INHERITED INJUSTICE:
STIGMA AND GENDER DISCRIMINATION AS BARRIERS TO AIDS PREVENTION
IN INDIA

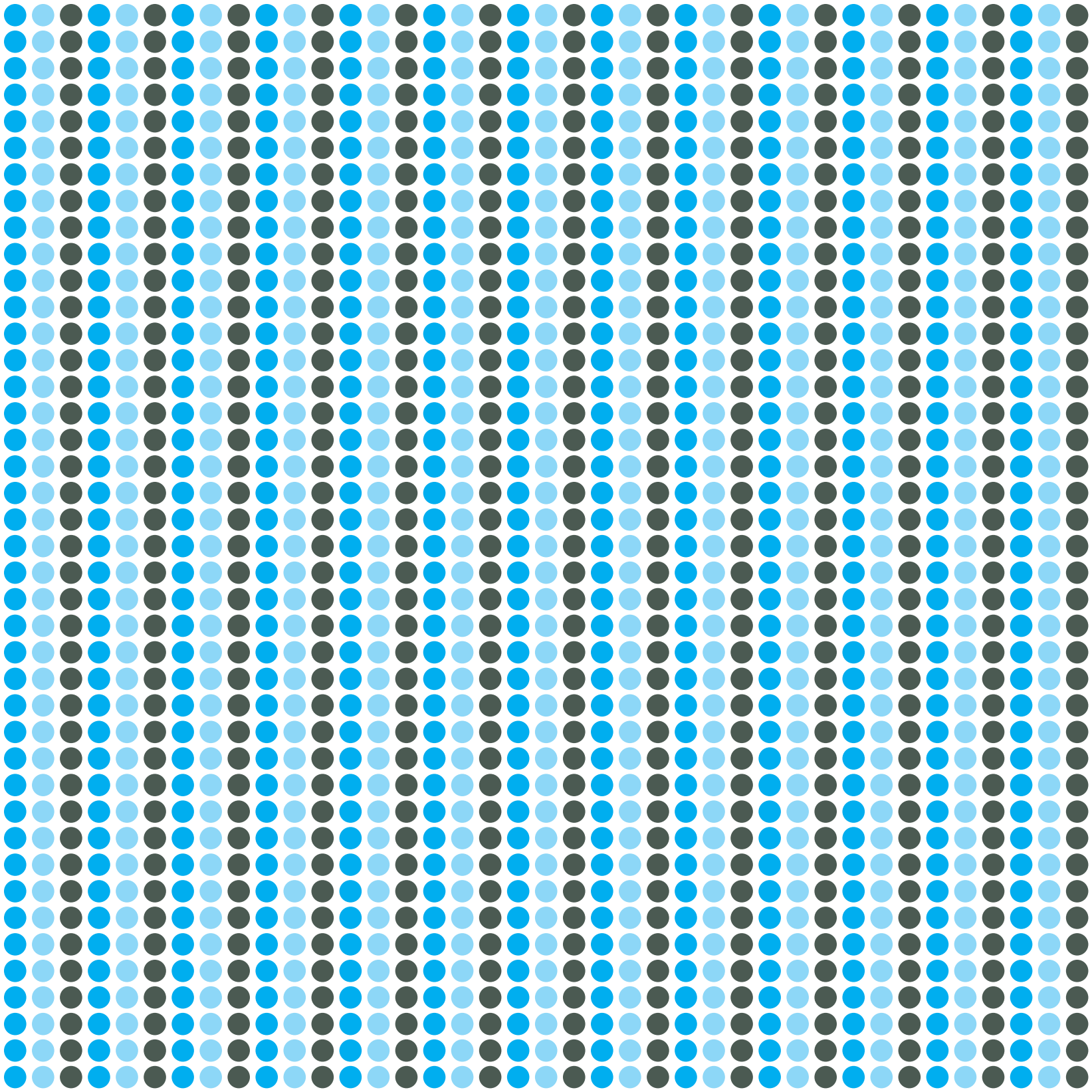
Catherine Larrabee

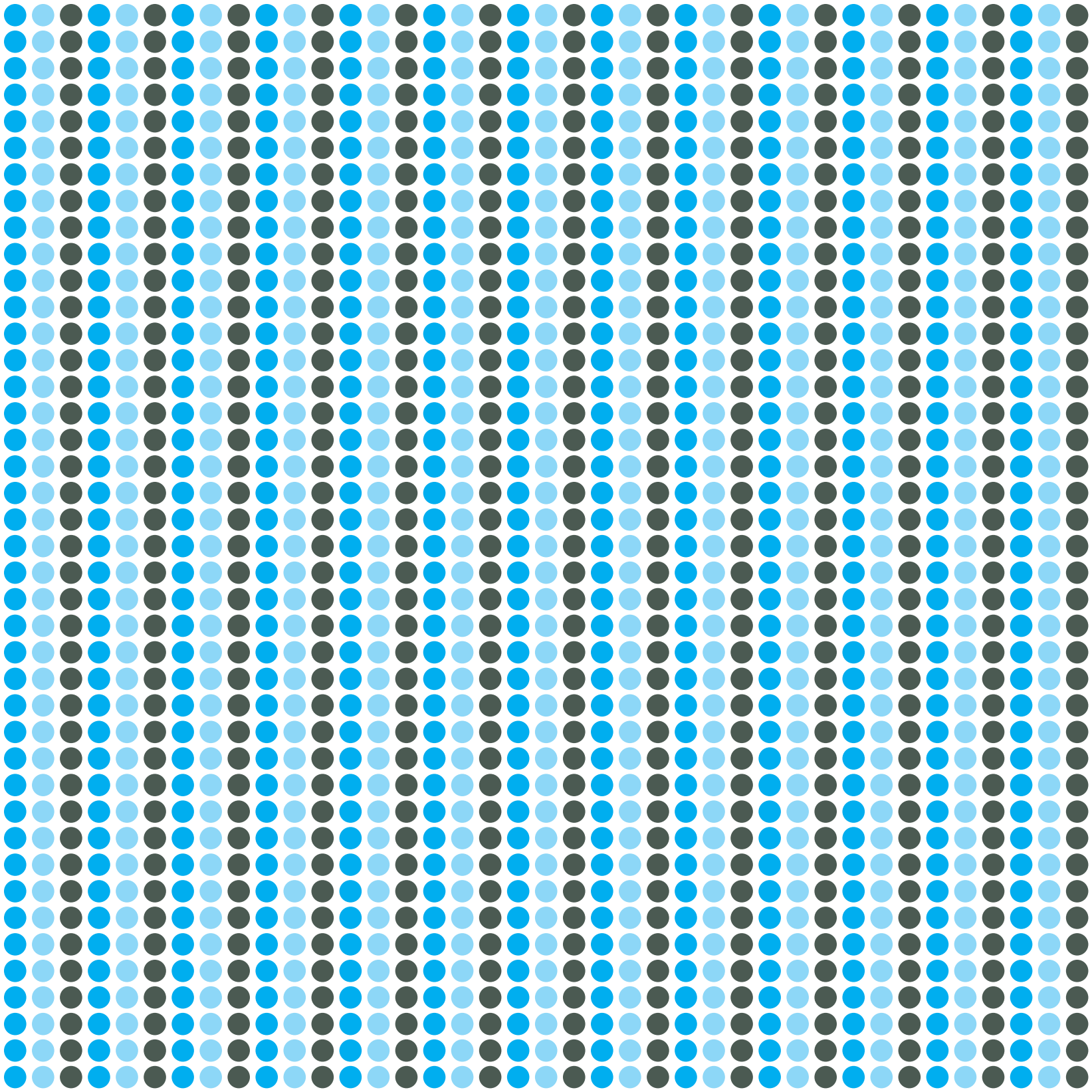
Exposing how the remnants of the caste system perpetuate vertical transmission in India's AIDS crisis.

100 AUTHOR BIOGRAPHIES

102 LIST OF ARTWORK







UBER TAKES THE PASSING LANE

Disruptive Competition and Taxi-Livery Service Regulations

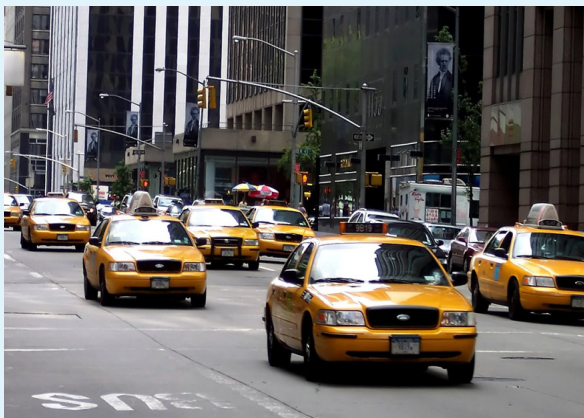
ALLISON SCHNEIDER

IT IS RARE THAT MUNICIPALITIES HAVE THE OPPORTUNITY TO REMAKE A SIGNIFICANT PORTION OF KEY INFRASTRUCTURE, AND TO DO SO WITHOUT SIGNIFICANT COST BURDEN ON THE CITIZENS. THE ADVENT OF UBER AND SIMILAR ENTITIES THAT HAVE MOVED THE RIDE-SHARING CONCEPT INTO THE 21ST CENTURY PROVIDE THAT UNIQUE CHANCE IN THE PUBLIC TRANSPORTATION ARENA. HOWEVER, CITIES SUCH AS LOS ANGELES, NEW YORK, AND CHICAGO ARE RESPONDING TO UBER AS A THREAT TO ESTABLISHED TAXI-LIVERY SERVICES AND THEIR ACCOMPANYING REGULATORY STRUCTURES RATHER THAN AN OPPORTUNITY FOR MODERNIZATION. IN ORDER TO CAPITALIZE ON THIS TRANSFORMATIVE MOMENT, CITIES AND GOVERNMENTS MUST RETHINK AND ADDRESS DECADES-OLD RULES, REGULATIONS, AND ENTRENCHED INTERESTS. THE BENEFITS TO AND ACCEPTANCE BY THE PUBLIC THAT SURROUND THE RIDE-SHARING MOVEMENT ARE UNPRECEDENTED. WHETHER TODAY'S POLITICIANS AND REGULATORS HAVE THE COURAGE AND FORESIGHT TO EMBRACE THIS FUNDAMENTAL CHANGE WILL DETERMINE THE LONG-TERM SUCCESS AND THE MEANINGFUL EVOLUTION OF OUR NATIONAL TRANSPORTATION NETWORK.

Technology has transformed much of our ingrained way of life. We no longer watch television at designated times or on predetermined days. We are no longer attached to a wall when making a phone call, and we no longer depend upon paper maps to guide us to our destinations. Similarly, the taxicab industry, an urban institution that dates back at least one hundred years, is being disrupted by the combination of smartphones, robust wireless connections, and ever-growing social networks.¹ The requirement to “hail a cab” or make a pre-determined appointment with a black car service has begun to diminish thanks to a new competitor that leverages the latest technology in order to bypass and streamline those requirements.

The most successful player in this compensatory ridesharing space is known as Uber.² Founded just five years ago, Uber now operates in more than forty countries and two hundred cities around the globe.³ Uber has rethought the entire transportation process, from initiating and completing a transaction, to the ride itself, to even the customer’s experience of the drivers and the cars they use. Acceptance has been extraordinarily successful, and as a result, has caught the attention not only of entrenched competitors, but also of those charged with regulating an industry that has changed only incrementally over the last several decades.⁴

Any industry so deeply established in urban life, when challenged, raises significant questions regarding the way forward. Traditional transportation providers largely operate on the basis of a regulated oligopoly through the issuance of medallions, or franchised licenses, and are subject to a complex set of regulations. Those investments are up-



TAXIS IN NEW YORK (COURTESY OF WIKIMEDIA COMMONS)

front and based upon the value of limited competition.⁵ However, they now face largely unregulated competitors who have limited oversight, minimal investment, and no requirement to pay upfront or as a percentage of their revenues for the right to operate. Regulators are now charged with oversight of minimum standards of operation, safety, vehicle selection, insurance requirements, and ensuring service areas that meet community requirements. Because Uber operates in a regulatory grey area, however, local officials have found that their powers of oversight are somewhat limited and have not kept pace with this dramatic change in service delivery.⁶ Therefore, they must determine the correct path toward the exercise of their office with respect to a business that does not fit into the existing regime of rules and regulations. As small and even large businesses, taxi and livery providers must discern whether the model is still viable and determine the long-term impact on the valuation of investments.⁷

From the standpoint of a municipality, the issue becomes a deeper financial question as well. Because the livery industry operates in the public right of way, the money derived from a right to operate is a meaningful source of municipal revenue. Since competition diminishes the value of these licenses, the municipality has a vested interest in protecting the status quo.⁸ The political implications have become somewhat clouded as it is citizens who have taken Uber from start-up to its current success. The balance between preserving the institution and giving the constituents what they want is tenuous at best.

OVERVIEW

This research paper explores a relatively new and disruptive social and economic force in major metropolitan areas. Ridesharing services such as Uber not only present a new competitive force in the marketplace, but also challenge the fundamental underpinnings of a long established regulatory framework. As a technological phenomenon, Uber goes further, changing the way its customers use and pay for transport services. By putting dispatch services directly in the hands of the consumer and breaking down barriers to entry, Uber has truly exploited the “social network” in a unique way.⁹

In order to understand and fully explore the integration of the opposing forces, this paper will look at the impact of this new transportation concept from the standpoint of each of the key players. In order to set a historical background, I will first explain Uber’s structure and why it be-

“Although there is always someone ‘looking to develop a better mousetrap,’ the Uber service has turned a decades-old business on its ear.”

believes it can operate outside of the regulatory environment. Additionally, I will analyze the legacy taxi and livery business, reviewing its economic, operating, and regulatory underpinnings to determine its strengths and weaknesses. I will further explore the motivating factors in the response to the new competition in an otherwise exclusive franchise environment.

As the research has revealed, a large portion of what motivates the taxi and livery business is a strict and complex regulatory structure. One might say that this business is truly an extension of the municipal transportation system that it serves. As a result, it is crucial to understand this framework and its political motivations both from a public policy and economic point of view. The municipal response has varied from passive to legislative to legal, each seeking to deal with the opposing forces while appeasing a growing number of ridesharing customers whose patronage is growing rapidly. For example, while Uber is a private company with limited public information, app research firm 7Park estimates that Uber’s transaction growth is up over 400% with sales growth over 250% during 2014, through November 15.¹⁰

It is this popularity among consumers that has made this issue so dynamic. Although there is always someone “looking to develop a better mousetrap,” the Uber service has turned a decades-old business on its ear. And while it is important to understand what fuels this acceptance, it is also crucial to account for the ancillary benefits of this new urban transportation system. After exploring this, I will then lay out the case for Uber’s ridesharing business concept, not only in terms of the economics, but also of the coincident benefits that impact users, providers, and communities in ways not originally contemplated.

Finally, I will draw conclusions based on research and historical precedents as they relate to current activity. One must draw these determinations, however, with the understanding that this experiment in alternative transportation is still somewhat in its infancy. The competitive responses are still muted, the regulatory framework is in a state of flux, and perhaps most importantly, the customers and

drivers who use and deliver the service are still “inventing” its full application.

My conclusions will focus on the reality that competition in the taxi business has become a permanent part of the urban transportation network. They will center on providing incentives to traditional providers so that they are encouraged to upgrade and modernize their operations and technology. In addition, I will recommend minimum operating standards for all providers so that all participants act in the best interest of the customer and for the betterment of the network. Finally, I will explore and ultimately reject any notion of directly compensating legacy license holders in order to protect their initial investments. Instead, I will conclude that traditional providers have a first mover advantage, an operating history, and the unique public center access to compete effectively, and as such, their ultimate success should be tied to that end.

WHAT IS UBER?

Uber, along with its smaller competitors, Lyft and Sidecar, is a ridesharing service that uses smartphone applications to connect riders and drivers. This system eliminates the concept of calling a dispatcher or hailing a taxi on the street. No cash is exchanged with the driver; rather, a credit or debit card stored in the application pays Uber, which then transfers the funds to the driver. The transaction on both sides is swift and elegant. Both the passenger and driver know the economics before the ride begins as it is calculated based on time, distance (provided by GPS), and demand (a so-called dynamic pricing model).¹¹

Potential riders can use their application to track the location of the driver, as well as his/her timing and approach to the pickup location. Similarly, the driver can easily locate the passenger in order to determine the most efficient approach. In complex urban environments with many one-way streets and minimal stopping and standing zones, this can be an invaluable tool. Once the ride begins, each driver uses a standard smartphone (provided by Uber) to determine the most efficient route, taking into account traffic, construction, special events, and other

known obstacles along the route. As there is no tipping involved, passenger and driver can make a quick and convenient exit.

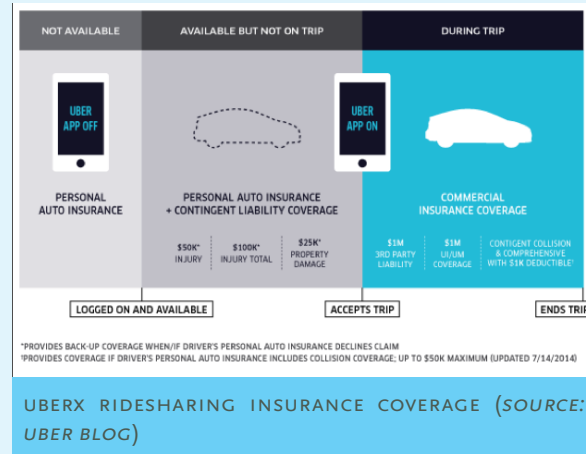
Each of these features stands in stark contrast to the traditional taxi service, which requires a transaction of cash or credit in the vehicle, calculated at the completion of a ride. The driver, without an objective measure of efficiency, determines the length and route of the ride. Further, there is no convenient way to track a taxi (even if it is obtained through dispatch) or for the driver to determine the passenger's exact location.

Uber's service also includes a self-monitoring feature not found in the traditional taxi: a driver and passenger review program. After each ride, the passenger is prompted and encouraged to rate their experience. Each phase, from pick-up to drop-off and from vehicle to driver, is rated for quality and efficiency. At the same time, drivers have an opportunity to report passengers who are problematic or present challenges to the system. This provides instant feedback that allows Uber to leverage its network and deal with consistently subpar service, as well as maintain an ongoing relationship with a customer base that is spread among diverse geographies, communities, and cultures.

As a relative newcomer to the marketplace, Uber has sought to establish credibility for safety and reliability, especially given the unique personal relationship each transaction provides. Most recently, Uber has sought to solidify its background check standards for drivers, an area of concern for municipalities and passengers alike. To that end, Uber hired the consulting firm Giuliani Partners (led by the former Mayor of New York, Rudolf Giuliani) to review the processes and procedures as well as the minimum standards. Giuliani's report draws some early conclusions: "Uber is on track to complete more than 2 million background checks in 2014 ... Uber is setting the safety standard in the ride-sourcing industry." Giuliani further notes, "The normal background check by many taxi services in major cities is a 3-5 year background check compared to Uber's 7 year check ... multi-dimensionally [is] more thorough ... blazing new ground in a quickly evolving industry."¹²

When it comes to stepping into a vehicle, insurance is always top of mind. Uber provides insurance coverage for trips in the amount of \$1,000,000, which is triggered for driver, vehicle, and occupants from the moment a driver

accepts a trip.¹³ This coverage is consistent across each city that is serviced by Uber and is nearly double that for taxicab accidents in most major cities. The methodology for such coverage is displayed in the chart below, which shows the insurance coverage for UberX cars.¹⁵



WHY IS UBER DIFFERENT FROM TAXIS?

At first glance, ridesharing may look like a taxi service: it uses a handheld 'smart' device to summon a ride to a specified location, for a fee. However, there are subtle differences that have a meaningful impact. Primarily, Uber drivers are not employees of Uber; they are each independent contractors who use privately-owned vehicles to offer rides ("rideshares") for a fee. In fact, such forms of legal and well-practiced ridesharing have been around and practiced through all manner of personal transportation: offering an acquaintance a ride for some remuneration, for instance reimbursement for gas and tolls, or putting in an expense report for the business use of a car. In fact, all Uber has done is create an efficient way to organize and brand these activities. From a regulatory perspective, Uber is not a car and driver, but a network that connects a willing rider to a willing driver for a pre-arranged fee.

While this may appear to be a distinction without a difference, most governing municipalities have not only recognized that current law is not of force, but have also begun the process of modernizing regulations to encompass ridesharing activities. For example, in 2013, California redefined these services into a category called "Transportation Network Services" with the intent to regulate.¹⁶ Other states and municipalities such as Chicago,

New York, and Los Angeles, which are addressed in this paper, have both recognized their need for expanded regulation and tried to accomplish this through the courts, legislation, statute, and administrative actions. While there is disagreement on how to deal with ridesharing services among the various agencies of the government, there seems to be a somewhat universal acceptance that such services are not directly or adequately covered by existing law.

IMPACT ON THE TAXI-LIVERY BUSINESSES

The modern taxicab business was established during the early twentieth century and has proliferated along with the expansion of infrastructure, the explosive growth of the gasoline-powered vehicle, and continued population growth in and around America's urban areas. Generally authorized to serve a municipality by license, taxis are subject to regulated rates, service areas, fares, quality, and insurance. In return, these cars-for-hire expect to be subject to limited competition in their service areas.¹⁷

The economics of this business were originally simple. In most large cities, the required capital an investor needed included an upfront payment for a medallion, franchise, or license, and an investment in a vehicle that met predetermined criteria.¹⁸ Ongoing operating costs included the cost of the driver, maintenance, tolls, insurance, and fuel. The efficiency of the driver, the demand from the local economy, and the nature of the service area set the revenue stream to determine profitability.¹⁹ Because of the limited number of entrants, the business became not only profitable, but quite predictable. As a result, the medallion or license values consistently grew over time. Medallions were consolidated into large corporate holdings within a single market, with values for single medallions in New York City surpassing the \$1 million mark in 2011.²⁰

As Uber entered the ridesharing business with superior technology and no cost of entry, the taxi and livery businesses fell under fire for poor service quality, inadequate service areas,²¹ and rate schedules that limited

the ability of riders to predict fares.²² Uber's sophisticated ridesharing, however, sits in a grey area largely outside of historical regulation.

The impact of competition on the regulated taxicab business has been swift and meaningful. A recent auction of medallions in Chicago drew no buyers.²³ New York, a city that has rarely seen a decline in medallion value, saw the first decline in fifteen years, the last being a slight decline after 9/11.²⁴ This, along with the growing operational issues of having a new competitor in the market, has left traditional taxi and livery companies on their heels. The value of the New York City taxi medallion has increased in the pre-competitive period and declined slightly in the more recent competitive environment.²⁵

The lines have been clearly drawn for the competitors as well as regulators and policy-makers. Lawsuits against cities have been filed as taxi medallion owners sought for protection for the exclusive territory that they are contracted for.²⁶ Uber claims there are no regulations to cover what they do, as this kind of operation was never conceived. Adding to the complexity, technology, social networks, and the flexibility of the new business model allows the business to morph and change based on the needs and desires of users, who in great numbers have been the beneficiaries of increased access and utility of the service.

REGULATORS: BRIDGING THE PAST AND THE FUTURE

Regulation and oversight have historically been evolutionary processes, particularly in the area of municipal transportation. The slow and methodical development of the means of municipal transport save politicians the luxury of time to determine and refine policy as circumstances changed. For example, in 1907, when taxi medallions were first issued in the U.S., there were fewer than 150,000 cars nationwide.²⁷ While that number has grown to over 254 million in the current decade, the pace of vehicle growth was moderate, at around five percent, since the 1960s.²⁸ As a result, there was plenty of time to develop an incre-

“From a regulatory perspective, Uber is not a car and driver, but a network that connects a willing rider to a willing driver for a pre-arranged fee.”

mental approach to the use of public infrastructure. Similar incrementalism can be seen with respect to the rollout of air, rail, and livery services. In New York City, there are 13,327 medallions currently in service, actually fewer than the 13,500 that existed in 1937.²⁹ Government agencies are, by definition, deliberative institutions designed to be methodical. Regulations regarding livery services have not changed much in years except after exhaustive studies in areas related to safety, pollution, and consumer protection.

Uber's entrance into the taxi and livery service marketplace has challenged the status quo on every level in a small amount of time. Municipalities faced with this disruption of the status quo have sought to gain leverage over Uber's activities in order to assert control and maintain regulatory authority and relevance. At the same time, they have incentive to protect their financial and contractual benefits with their current "lessees": the medallion holders.

Cities are now faced with a set of regulations that do not fit this new form of ridesharing, and as a result are trying to fashion existing rules into an area they were not designed to cover, all during a time when technology in general is morphing daily. For example, the city of Los Angeles, among other large California cities, sent cease and desist orders to Uber through their Department of Transportation. Citing a lack of authority to operate, it ordered Uber to stop picking up "passengers for hire." The order was made on the basis of public safety, perhaps the only omnibus regulation that could be stretched to accommodate their goal, threatening drivers with arrest and auto confiscation.³⁰ The cities, however, did not seem to understand that there was a new entrant in the discussion--the constituent. Regulation or not, consumers have adopted the rideshare service with great gusto. The *Los Angeles Times*, in a timely and pointed editorial just days after L.A.'s assertion noted out the lack of municipal authority, wrote: "The problem is...[the City] does not have the authority to do so... the companies offer ride for hire services that the state Public Utilities Commission oversees... the main danger the companies pose at this point is to the cabbie's hold on what used to be a captive market".³¹ Despite the threats, the ridesharing companies still operate in the city of Los Angeles and throughout the rest of California.

In Chicago, the city's mayor, Rahm Emanuel, took a much more direct approach, introducing a law that sought to re-define rideshare companies and protect the entrenched taxi and livery business. A seven-point plan was offered, which included preventing these companies from owning

or financing vehicles, eliminating UberX cars, prohibiting advertisements on the vehicles, prohibiting airport drop offs, and a series of mandatory reporting requirements.³² The ordinance, clearly aimed at gutting the core of the ridesharing service, drew the ire of populist organizations. Jacob Huebert, senior attorney for the Liberty Justice Center, laid out a view directed toward the citizenry: "Citizens should be disturbed by a city government that is more concerned about pleasing a politically connected special-interest group than in letting consumers choose the services they like best. And they should be more disturbed that government officials are more interested in continuing cronyism for as long as possible than in letting Chicago thrive in the twenty-first century."³³ In August, the City of Chicago rejected the Mayor's plan and instead passed an ordinance with a much more relaxed and workable set of requirements, based largely on feedback from constituents.

In New York City, meanwhile regulators took a different tack. With no desire to change or amend regulations to accommodate the ridesharing service, the Attorney General of the State of New York brought a lawsuit seeking to re-characterize ridesharing, pushing to fit it back into twentieth century standards: "As it has done in every other city in which it operates, defendant has simply waltzed into New York and set up shop while defying every law passed whose very purpose is to protect the People of the State of New York. Defendant runs what is at the core a for-hire livery or taxi service. Defendant portrays itself as a twenty-first century technology business. In reality, it uses a smartphone app to run a twentieth century business..."³⁴ Whether through regulatory edict, the passage of legislation, or the courts, municipalities are struggling to transition to a service that cannot be put comfortably into an existing regime.

BENEFITS OF THE UBER MODEL

Uber's opportunity to rethink the urban ride-for-hire concept arose out of its recognition that the nearly century-old taxi business had, for the most part, become stagnant. The number of taxi medallions or licenses had barely changed since the early 1900s, yet the population in major cities like New York had nearly tripled.³⁵ Uber's management saw what they perceived as a hole in demand, service offerings, and a faulty municipal framework that allowed for a new, largely unregulated service. Perhaps most important was Uber's ability to marry this concept of alternative transportation with an immediately addressable network of mobile smartphone users who could act as their own



IN A JANUARY 2015 PROTEST, PORTLAND TAXI DRIVERS DEMANDED THAT CITY LEADERS MAKE RIDESHARING COMPANIES PLAY BY THE SAME RULES AS CABS AND TOWN CARS. (COURTESY OF WIKIMEDIA COMMONS)

dispatchers, effectively calling on available drivers for rides. Wireless services, GPS, and sophisticated applications not only surpassed the current system, but also drove overhead dollars out of the model.³⁶

Of course, no service can be characterized as successful or disruptive unless it provides demonstrable benefits in the marketplace. Uber services are aimed squarely at providing an enhanced experience, but the benefits generally fall into three general categories: (1) The direct customer usage; (2) The enhancement to the public transportation system; and (3) Those who provide the service as drivers.

In general, Uber and other ridesharing users have shown approval of the service. The CEO of Uber, Travis Kalanick, recently described his company growth: “The company is growing at an alarming rate, quadrupling its sales every year on the back of hundreds of thousands of drivers and millions of riders”.³⁷ Since its founding in 2009, Uber has expanded into forty-five countries and more than 200 cities. However, while these numbers are impressive, they do not fully explain the factors that drive the popularity of Uber’s concept.³⁸

A study by the University of California Berkeley, based upon surveys done with ridesharing customers, sheds light on the motivating factors of using Uber.³⁹ The top five factors all focus on the simplification of the transportation process. From the payment and the speed to the initiation

of the transaction, participants were more impressed with ridesharing companies than with other forms of transportation. It is no wonder, then, that the existing oligopoly providers are concerned enough to take the actions discussed in this paper. It is interesting to note that, beyond the convenience of use and the immediate need of getting from place to place, users are also developing appreciation based on lifestyle issues. More than twenty percent of respondents noted that this was a convenient alternative to driving under the influence—a meaningful percentage, possibly based upon the technological ease of use and availability of the Uber service as compared to taxis. This social benefit portends additional attributes that appear to be bolstering adoption.⁴⁰ This, along with other social motivations such as not needing a parking space, are signs that Uber customers see lifestyle benefits beyond simply having an alternative to taxi or livery services, which is a powerful driving force in Uber’s penetration of the marketplace.

Uber, and ridesharing in general, appears to have a positive impact on the general infrastructure of transportation as well. If the purpose of the transit network is to provide safe, reliable, and on-time transit to its users, Uber seems to be pulling its weight, if not setting a new standard: “UC Berkeley researchers found that in the evening rush, 92 percent of rideshare cars arrived in under 10 minutes, while only 16 percent of taxis did so. And while 37 percent of taxis took longer than 20 minutes, only one percent of rideshares took that long.”⁴¹

Another social benefit of Uber is the ability for urban and suburban residents to reduce or even eliminate their reliance on personally owned vehicles. A survey commissioned by the City of San Francisco revealed that there is a shortage of taxi services, which affects the overall use of the public transportation system. Since taxis function in large part as the initial or final leg of access to the mass transit system, the lack of availability drives consumers toward private ownership of vehicles: “28 percent would take public transit more often if taxis were more reliable ... 11 percent would consider giving up one or more of their cars.”⁴² Because Uber provides greater availability of transportation, the number of cars on the road decreases, and the realization of such a goal becomes more apparent. “Over the next few years, if Uber and other such services do reduce the need for private vehicle ownership, they could help lower the cost of living in urban areas, reduce the environmental toll exacted by privately owned automobiles ...

and reallocate space now being wasted on parking lots to more valuable uses, like housing.”⁴³

Another benefit of Uber’s ascension is that of increased employment. Uber’s model is based upon drivers who are not Uber employees, but rather, a new breed of small business owners.⁴⁴ As opposed to the upfront fees required for taxi ownership such as medallions or other licensing fees, there are few barriers to entry. Access to a clean car and a somewhat flexible schedule is all that is needed. Uber provides the technology and hardware to connect a driver to the network, helps to initiate and complete the transaction, and handles the bookkeeping. According to its website, Uber creates 20,000 jobs per month.⁴⁵ Those jobs come with meaningful compensation for drivers in major urban areas. “UberX driver partners are small business entrepreneurs demonstrating across the country that being a driver is sustainable and profitable. For example, the median income on uberX is more than \$90,000/year/driver in New York and more than \$74,000/year/driver in San Francisco.”⁴⁶ While these large cities are areas where Uber has operated for some time, results portray the ease of entry and high demand for those who choose local transportation as a profession, a job, or a part-time enhancement to their income.

PUBLIC POLICY SUGGESTIONS

While it is still too early in the evolution of ridesharing to determine the long-term financial impact on the legacy taxi industry, it is clear that the effect of Uber, as a new competitor in the market, will be financially material and create significant change. From a regulatory standpoint, municipalities should seek to ensure that this essential portion of the urban transportation system continues to operate efficiently, protect the consumer from potential harm, and ease ridesharing’s inevitable transition from a regulated oligopoly to full-fledged competition. This transition has already benefited the consumer and municipal systems by providing more choice, more predictable pricing, and additional technological leverage in order to provide better and timelier information to the user.

Specifically, the municipalities should seek to level the operational playing field through the adoption of minimum standards. These could include vehicle standards, driver qualifications, insurance requirements, and service standards to ensure consistency in operating the performance necessary to stabilize and ultimately enhance the transportation network. While such standards and regulations

should be codified, it is interesting to note that, as documented in this research, Uber currently meets or exceeds many of the standards that exist for the taxi industry.

Regulators should not, however, adopt the current framework, which protects the status quo of the taxi business and whose methods of operation, pricing systems, equipment, and customer service are quickly becoming obsolete. While entrenched medallion, license, and franchise holders have lobbied vigorously to protect their legacy advantages, it does not appear that they have put that same level of vigor toward a competitive response. Perhaps this is where municipalities can incentivize change. Regulators have the opportunity to go a step further and induce traditional taxi improvements. Providing relief from license or franchise fees to operators who upgrade their fleet or technology would balance operational enhancements with the current financial framework. At the same time, cities should adopt a more flexible pricing structure that can be implemented as certain levels of competitive market penetration are met. Allowing licensed taxis to simplify rates can provide both a competitive tool and an incentive to match market demand with economic return.

While it is tempting to try to recover the original cost of entry through the medallion process, there is little precedent for such relief. History shows no such reimbursement to the horse-drawn carriages of the nineteenth and early-twentieth centuries, when the original medallions and franchises were issued to motor vehicles, nor any governmental assistance to regulated telephone companies when its monopoly was dismantled by competition from unregulated wireless carriers such as Sprint and MCI.⁴⁷ Similarly, cable television companies that operate pursuant to municipal franchise now compete with unregulated cell phone and satellite signal providers. In each case, the companies, originally provided with a monopoly advantage in the early stage of development, were forced to reinvent themselves or face extinction.

While meaningful competition has arrived and does not appear to be going away, taxi companies have advantages that are directly related to their implied role as a transportation provider of “last resort”: A long operational history, brand recognition, and a loyal customer base that has come to rely on the ability to “hail and go.” In addition, they understand how to acquire, own, and operate large vehicle fleets, and have preferred logistical positions at public transportation centers such as airports, train station, and city centers. It is in the interest of the taxi indus-

try to leverage these advantages as they recognize the inevitability of a fully competitive environment.

CONCLUSION

Uber's success and its concept of ridesharing have been driven in large part by technology and more so by the power and reach of the social network, and its implications are nothing short of dramatic. Within five years of operation and with fewer than three hundred employees, Uber has managed to disrupt the taxi and livery business, a business that has otherwise operated without competition for more than one hundred years.⁴⁸ Along the way, a loyal following of customers have re-imagined how personal transportation in urban areas may be effectively used. From an alternative to privately-owned vehicles to a "safe-ride" substitute for driving under the influence, customers are molding the product. As a result, the benefits of Uber have become personal to its following, something the entrenched taxi monopoly could never claim.

Just as interesting as the loyalty of Uber's customers is the opposition to its mere presence on the urban stage. The reaction of the taxi and livery business has been to "circle the wagons." Rather than take this disruption as a wake-up call and use their incumbency to their advantage, they have chosen to fight for the status quo, staging protests rather than restaging their operating and consumer service strategy. One such high-profile reaction came in Los Angeles, when two hundred taxis circled City Hall and honked their horns--surely a less than high-tech response with little follow-up support.⁴⁹

In fact, there is likely little chance of going back to the taxi and livery model of limited competition. With such clear and compelling benefits, acceptance by the consumer is without question; the real issues left to be ironed out are clearly in the hands of regulators. Courts will have their say, but that will only serve to guide the political edge of public policy. Public officials will have the opportunity to shape the future of urban transportation, perhaps for decades to come, but the looming question is whether, and how, they will rise to the challenge. With cities resorting to cease and desist letters, restraining orders, and hurried ordinances, thoughtful regulation and reaction have been pushed to the side. Rick Wartzman of the Drucker Institute capsulized the challenge, stating, "As Peter Drucker would have seen it,⁵⁰ both taxi operators and their local government overseers are focused on the wrong thing; trying to sweep Uber into yesterday's reality, rather than moving the entire system toward tomorrow's".⁵¹

It is those overseers who will eventually lay out the parameters of Uber's success or failure. Regulations are the instruments of practice for those charged with the public trust, and they must be handled with care. As Drucker himself wrote, "Regulations, no matter how badly needed at any one time, and how beneficial at any one time, always become obsolete eventually".⁵²

The taxi and livery system will continue to fight, perhaps with good intention, and perhaps out of self-preservation. However, without redirecting some of their energy and resources to improved quality, technology, and customer service, they are in danger of going the way of the payphone: eventually becoming extinct despite their preferred position on our city streets. City and state officials have the opportunity to stay relevant on this issue, but only after objective recognition of the economic, technological, and municipal advantages of this new augmentation to the public transportation system, while working in the best interest of their constituents. The question that remains is whether those regulators will be looking forward or through the rear-view mirror.

ENDNOTES

1. Downs, *Lessons from Uber*, 2014.
2. Ridesharing is a ride matching system that formally or informally links riders to drivers traveling between the same places at the same times. So-called "dynamic" or "real-time" ridesharing is a form of ridesharing that is used for single, one-way trips rather than for trips made on a regular basis at the same time (Levofsky and Greenburg 3).
3. Seward 2014;3 Uber was founded in 2009 by Travis Kalanick, the then and current CEO, along with Garrett Camp. Both men had financial and technological success selling prior businesses to established internet companies. The original idea for Uber stemmed from trying to solve what Kalanick described as a "horrific taxi problem in San Francisco" (Kalanick 2014). The name Uber appears to have come from an American interpretation of the German "über". In America, the word Uber has become a relatively common, if slangy synonym for "super" or "topmost"; it reflects what Uber CEO Travis Kalanick has called in interviews the company's "disruptive ambitions" (Peterson 2014).
4. An 'Uber' Problem for Cities, 2012.
5. Badger, *Taxi Medallions*, 2014.
6. Mann, *Cities Move to Rein in Smartphone Taxi Services*, 2012
7. Generally, the difference between a taxi service and livery service is two-fold. First is the way they are dispatched. One can "hail" a cab on the streets. For example, in New York City, only yellow medallion cabs can legally pickup street hails. Livery, or black car, services generally only respond to radio calls. The other difference relates to pricing. Taxi cabs have a metered pricing

system based upon time and distance while livery cars operate on a zone pricing system, which is fixed fees based upon location or distance (Dawid 2011).

8. Badger, *Taxi Medallions*, 2014.

9. Uber is not alone in as a force of change in highly regulated environments. Another example with similar impact is Airbnb, which is challenging the hotel business by allowing users to share their homes or otherwise rent them to prospective “tenants”. Using a similar matching application, Airbnb brings interested parties together outside of the conventional regulatory framework that controls the traditional hotel business. Rebranding and refreshing an outdated means of access, while at the same time allowing providers and consumers to define their niche in the marketplace has created what is referred to as the “platform culture” (Sundararajan 2014). The social network platform allows an organized interaction between market participants where market content is created and distributed through local channels rather than a central dominant provider. Uber, Airbnb, and other such application platforms provide an elegant way to interact, while the forces of market demand are shaking the foundations of legacy providers.

10. Lunden, *Uber Ride High*, 2014.

11. Dynamic pricing refers to the setting of prices for a good or service based upon demand at a particular moment and the availability of supply; the added complexity in Uber’s case is that pricing becomes a moving target, changing almost in real time depending upon what is happening in the market at a particular moment (Morphy 2014). According to Uber, with dynamic pricing (referred to as “surge pricing”), rates increase to get more cars on the road during the busiest times. When enough cars are on the road to meet the demand, prices go down (“What Is Surge Pricing” 2014).

12. Giuliani, *Uber Setting the Standard*, 2014.

13. Nairi, *Insurance for UberX*, 2014.

14. Generally, states require taxi companies to carry between \$250,000 and \$500,000 of liability insurance, and there is no uniform requirement to carry uninsured motorist coverage (Denmon 2014).

15. UberX is the brand name that Uber uses for its lower cost option, with fares targeted at 20% below that of a taxi. UberX drivers have mid-range or hybrid vehicles with seating for up to four passengers. This is distinguished from Uber Black Car service, which provides luxury level cars and SUVs. While UberX cars are driven by licensed drivers, Uber Black Cars are driven by licensed limousine drivers (Fiorillo 2014).

16. Geron, *California Becomes First State to Regulate*, 2013.

17. Federal Trade Commission, Bureau of Economics, *An Economic Analysis of Taxicab Regulation*, 1984:64

18. Approximately 60% of the top-ten U.S. cities by population operate on a franchise or medallion basis while the other 40% operate on a license platform. While both formats have strict regulatory requirements, they differ in that medallion and franchise holders pay substantially higher upfront payments, while licenses pay a higher percentage of revenue to the municipality on an ongoing basis. An expanded review of large, but not top ten, cities reveals that older and more densely

populated urban environments, such as Boston, Detroit and Newark, tend to operate on a medallion or franchise basis, while newer, more expansive cities with several urban centers tend to license taxi businesses. See the chart below for the specific methods for taxi regulation in the top ten U.S. cities.

Top-Ten U.S. Cities by Population (and Their Methods for Taxi Regulation):

New York City (Medallion)

Los Angeles (Franchise)

Chicago (Medallion)

Houston (License/Permit)

Philadelphia (Medallion)

Phoenix (License/Permit)

San Diego (Franchise)

Dallas (Franchise)

San Jose (License/Permit)

San Antonio (License/Permit)

Source: US Census and individual municipalities’ transportation regulations

19. Federal Trade Commission, Bureau of Economics, *An Economic Analysis of Taxicab Regulation* 1984:80-2.

20. Coscarelli, *Taxi Medallions Hit 1 Million Mark*, 2011.

21. Many urban taxi companies are reluctant to carry passengers beyond their local service area. To do so would limit the number of trips that could be made on a particular shift. The further a taxi travels from its core service area, the less likely a return fare will be available, creating an uncompensated or “dead” run. While regulations discourage this behavior, it has been difficult to enforce (McArdale 2012).

22. Badger, *Taxi Medallions*, 2014. Taxicab fares, while highly regulated, can be confusing and difficult to predict. In the metered environment, fares are based on both mileage as well as time. Both are variable and dependent on traffic and detours, as well as the route taken by the driver (Mathis 2008). In addition, the rate of fares can be highly complex. In New York City, the fare starts based on \$0.50 per 1/5 of a mile, depending on the rate of speed. There are also surcharges depending on time of day. As a result, the regulated fare cannot be easily predicted or calculated (“Rate of Fare” 2014). This is in contrast to the Uber practice, which predicts the full fare to the customer before the trip is initiated.

23. Ibid.

24. “The average price fell by \$5 in June [2014]—a slight decline for medallions, which trade for a bit more than \$1 million apiece, but still an unheard-of occurrence in recent years ... Bloomberg keeps quarterly data on New York medallion pricing going back 10 years, and the last time prices fell for a full year was from 2000 to 2001 ... There are similar signs of strain on medallion values in Chicago and San Francisco” (Brustein 2014).

25. Brustein, *Uber’s Fare War*, 2014.

26. Tuttle, *Rideshare Battle Shifts to L.A.*, 2013.

27. *Facts and Figures of the Automobile*, 2013

28. US Department of Transportation, Section B, *National Transportation Statistics*, 2011.

29. Horowitz and Cumming, *Taken for a Ride*, 2012; Schaller and Gilbert, *Villain or Bogeyman?*, 1996.

30. Tuttle, Rideshare Battle Shifts to L.A., 2013.
31. The Times Editorial Board, L.A. Times, Uber, Sidecar and Lyft, 2013.
32. Huebert, Chicago's Uber Ordinance, 2014.
33. Ibid.
34. State of New York v. Lyft, Inc., 2014.
35. Census Scope, Population Growth, 2014.
36. Elliott, Taxi or Tech Company?, 2014.
37. Segall, Our Growth is Unprecedented, 2014.
38. (Seward 2014:3)
39. Rayle et al., Comparing Taxi and Ridesourcing in San Francisco, 2014.
40. Ibid.
41. Ferenstein, 2 New Studies Show how Uber Makes Cities More Productive, 2014.
42. Hara and Canapary, Best Practices Studies of Taxi Regulation, 2013.
43. Manjoo, Less Reason to Own a Car, 2014.
44. Craig, An Uber Impact, 2014.
45. Ibid.
46. Ibid.
47. Both MCI Communications and Sprint Corp. started as telecommunications bypass companies. Building or acquiring private networks, each offered businesses and then consumers lower cost access to the long distance communications network. They relied on loopholes in a complex and archaic set of regulations (not unlike Uber) that were, at the time 70 years old. Using a simple and direct rate structure and the perception of higher quality service, each made inroads with respect to market share. Ultimately, MCI brought a lawsuit against the bell system of telecommunications companies that led to their ultimate breakup (Cantelon 1993).
48. Lagorio-Chafkin, Resistance is Futile, 2013
49. Srikrishnan, L.A. Taxi Drivers Refuse to Protest Uber, 2014
50. According to the Drucker Institute website, "Peter F. Drucker was a writer, professor, management consultant and self described 'social ecologist' ... hailed by BusinessWeek as 'the man who invented management,' Drucker directly influenced a huge number of leaders from a wide range of organizations across all sectors of society."
51. Wartzman, The Uber Challenge, 2013.
52. Ibid.

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A GRAMMAR OF PUNCTUATION IN POETRY

Modern Computational Linguistic Perspectives

DOYLE CALHOUN

THE FIELD OF LINGUISTICS FOCUSES ON THE SPOKEN INCARNATION OF LANGUAGE AND CONSIDERS WRITTEN PHENOMENA AS AN IMPERFECT APPROXIMATION OF THE FORMER. THE AUTHOR ARGUES THAT PRESENT UNDERSTANDING OF PUNCTUATION AS A SUBSYSTEM OF HUMAN LANGUAGE IS INADEQUATE, AND THAT EVEN WHEN STUDIES EXAMINE PUNCTUATION FROM A LINGUISTIC STANDPOINT, THEY EMPHASIZE MODERN WRITTEN LANGUAGE AND AMERICAN ENGLISH IN PARTICULAR. IT IS, HOWEVER, QUITE POSSIBLE TO DESCRIBE THE BEHAVIOR OF PUNCTUATIONS WITH THE SAME METHODOLOGY THAT WAS UNTIL RECENTLY RESERVED FOR SPOKEN LANGUAGE. JUST AS LANGUAGE DEVELOPS OVER TIME AND CHANGES FROM PLACE TO PLACE, SO TOO DOES PUNCTUATION. THIS PAPER ARGUES FOR THE COMPATIBILITY BETWEEN RECENT DEVELOPMENTS IN COMPUTATIONAL LINGUISTICS' APPROACHES TO PUNCTUATION AND TEXTUAL CRITICISM THAT ATTENDS TO PUNCTUATION IN POETRY. A FULL UNDERSTANDING OF ITS CONVENTIONS IS CRITICAL FOR A PROPER INTERPRETATION OF MEANING. FURTHERMORE, THE AUTHOR SHOWS THAT THE RELEVANCE OF THESE STUDIES TO LITERARY ANALYSIS REMAINS UNEXPLORED. NEVERTHELESS, WITH THE DEVELOPING TECHNIQUES MADE POSSIBLE THROUGH COMPUTATIONAL LINGUISTICS, THE POTENTIAL FOR IN-DEPTH STUDY IS EXPANDING.

While the punctuation of a poem may not always figure into its critical analysis, literary critics and textual scholars seem to agree that punctuation constitutes at least one of the non-verbal tools of poetic expression available to the poet. As such, it is one of the features to which the critic could attend. It would be unusual, for instance, for an analysis of E. E. Cummings's poem "l(a)" to fail to mention the twisting parentheses, or for a critical edition of Dickinson's verse to not make some ruling on typesetting the length of her dashes. The extent to which scholars perceive punctuation as relevant to their text-interpretive or text-critical endeavor varies. Nonetheless, punctuation has its discernible place in literary studies: John Lennard gives a book-long treatment to the use of parentheses in English verse (1991); Christopher Ricks attributes an almost metaphysical aspect to punctuation in *The Force of Poetry*—it is "at once a uniting and a separating" (1984); Robert L. Kellogg and Oliver L. Steele dedicate an entire article to alternative punctuations of the last two lines of *The Faerie Queene* (1963).

Punctuation has not benefitted from the same sustained attention in linguistics. Only in the past thirty years has punctuation become an object of empirical linguistic study, apart from prescriptive accounts of its usage. This is probably because formal linguistics, unlike literary studies, tends to view written language as a byproduct of spoken language or its imperfect image, a stance that reduces punctuation to a deficient and inadequate mode of representing or registering prosodic features of speech stream, like intonation. Or, perhaps, the reluctance of modern generative linguistics to see punctuation as a worthwhile focus for linguistic inquiry stems from the reality that it is an extra-verbal phenomenon. Punctuation is not a necessary (or very common) feature of human language: not all speech communities have written language, and not all written languages have punctuation. Typological studies on punctuation systems vary in different linguistic subfields: psycholinguistic work on how punctuation is realized in the lexicon; large-scale empirical investigation into punctuation at various synchronic stages of a single language; context-specific analyses of punctuation (particularities of its use in literary or legal language, as an example). All these areas remain under-examined.

Recent efforts in computational linguistics, however, make use of computerized corpora to bring attention to the fact that punctuation is a coherent, rule-governed linguistic subsystem in its own right. B. Say and V. Akman survey

extant research on punctuation marks from the point of view of natural language processing (NLP), and propose an information-based framework for describing and understanding punctuation (1997). According to their model, punctuation can be seen as contributing to the information conveyed by a sentence or intrasentential clauses.¹ Taking *information* to mean propositional content which constitutes a contribution of knowledge to [sic] reader's knowledge store, they demonstrate how to use discourse representation theory (DRT) and segmented discourse representation theory (SDRT) to deal with punctuated written texts.² DRT and SDRT use representational boxes with a set of referents (entities in the discourse) and conditions (properties that relate the referents), which are built incrementally over the course of the discourse and which can be resolved into a construction algorithm. The major contribution of this highly technical work is to demonstrate that punctuation can be described systematically, and as they suggest, (eventually) accounted for in a unified theory that computational linguistics can apply to both analyzing and generating written language.

The points raised by Say and Akman and their exercise of formalizing punctuation in terms of DRT and SDRT are relevant to literary studies and textual criticism. The absence of any unified linguistic theory of punctuation and the dearth of research programs aimed at formulating one disadvantage the linguist and literary scholar alike. The result of this gap in language science and literary studies is that the modern understanding of punctuation as a feature of human language is unclear, its use at any given synchronic stage in any given language even less clear, and its marked use in literary contexts totally unexplored.

To complicate the matter, studying punctuation, especially punctuation in poetry, gives rise to a problem of definition: namely, what counts as punctuation? In his Brown Corpus study, Meyer distinguishes between structural punctuation symbols (those that act on units not larger than the orthographic sentence and not smaller than the word, i.e. not hyphens or apostrophes) and other punctuation (text-graphical features like paragraph breaks, font changes, lists) (1986). The distinction is a useful one in linguistics, but obfuscates features of punctuation that might be relevant to literary criticism or poetics: one can imagine a poem in which intra-morphemic punctuation or suprasegmentals, such as diacritics, function in a non-trivial way.

In addition, a purely formal description of punctuation elides certain features of punctuation that are particular to

literature, and poetry in particular. Such particularities of literary punctuation include its: rhetorical force, aesthetic or visual dimension, meta-physical qualities, allusive potential, and effect on meter. The ability of a hyphen to suggest a unique kind of bond that, in Ricks' terms, holds apart at the same time it holds together, is a dimension that is relevant and meaningful to the literary critic but one which the computational linguistic is likely uninterested in capturing.

All this is not to diminish the potential of computational work on punctuation to contribute to a more comprehensive understanding of punctuation in literary studies. Rather, it is to point out that for such research to be truly useful to the literary critic, it must be specific enough to accurately describe punctuation as a subsystem of human language and general enough to handle additional factors based on stylistic register or context.

The work of Nunberg (1990) gets closest to that balance, at least according to Say and Akman (1997).. As they point out, Nunberg's (1990) treatise retains its influential status as the first comprehensive attempt to approach punctuation from within the generative, or Chomskian, paradigm: to decipher it in terms of a *text-grammar* and to conceive of it as a generative system describable by rule-governed operations. Working within this framework, Nunberg builds a collection of rules he uses to explain the distribution of text-categories — the inter-punctuational units (text-adjuncts, text-clauses, text-phrases) dealt with by the lexical grammar.³ An example of such a rule treats the interaction of two English punctuation marks: "The point absorption rule dictates that a period will absorb a comma when they are immediately adjacent."⁴

Nunberg's account of punctuation recognizes that punctuation marks are not distributed randomly or arbitrarily, but like natural language reflect a series of hierarchically ordered abstract rules. What Say and Akman find lacking in Nunberg (1990)— and what they identify as a desideratum in the field of computational linguistics— is a formal

theoretical apparatus that can characterize punctuation not just in terms of its relationship to syntax, but also account for its semantic and discourse-related effects.⁵

Work in algebraic linguistics underscores the importance of attending to these effects. At least in terms of logical value, punctuation is as much an observable feature for the critic to attend to in a poet's work as it is in his or her own writing on a poet's work. In his article "Punctuation and human freedom", linguist Geoffrey K. Pullum provides the following example of how a simple transposition of punctuation marks alters the truth-conditions of a statement:

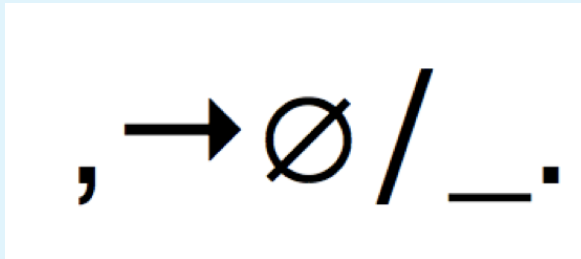
(i) Shakespeare's *King Richard III* contains the line "Now is the winter of our discontent."

(ii) Shakespeare's *King Richard III* contains the line "Now is the winter of our discontent".⁶

The claim in (i), he argues, is false. For Shakespeare's play does not contain the line "Now is the winter of our discontent." Rather, it contains the line "Now is the winter of our discontent", which is actually the first of two lines that form the sentence: "Now is the winter of our discontent made glorious summer by this sun of York." In the play-text, as Pullum points out, "Now is the winter of our discontent" is not even a syntactic constituent; although, in (i), the convention of placing terminal punctuation before quotes makes it look as if it were. Pullum's point here seems a slight one—or, perhaps, an overly-fastidious one—but it is important to realize that he is not leveling a prescriptive stylistic complaint; he is pointing out the linguistic reality that punctuation marks interact with, and have the ability to alter, the truth-conditions of a claim. The question is one of logical truth, not of style.

An alternative approach to Nunberg's generative-style grammar of punctuation might be a purely distributional one. In his corpus studies, Karlsson (1994) demonstrates the possibility of describing punctuation in terms of statis-

"Recent efforts in computational linguistics, however, make use of computerized corpora to bring attention to the fact that punctuation is a coherent, rule-governed linguistic subsystem in its own right."



THE FORMULATION OF A LINGUISTIC RULE IN STANDARD NOTATION (FONT LICENCED THROUGH ADOBE INDESIGN)

tical frequency, rather than binary tag-features like [±stoppedness], which Nunberg (1990) makes use of. As Karlsson's findings suggest, it is possible to characterize punctuation marks based on their immediate context. For instance, he reports: "A punctuation mark to the left of a finite verb dramatically decreases the probability that the preceding word is a grammatical subject (of all the finite verbs preceded by a punctuation mark, less than 5% had the preceding word as subject)."⁷

Karlsson's work is conducted within and for the milieu of computational linguistics; his concerns are necessarily different from those of the literary critic. But might literary researchers employ a similar distributional approach to more accurately determine statistical patterns of punctuation use? The presence of digitized corpora makes such a task possible and, most importantly, allows researchers to carry out their analyses without reference or subservience to other linguistic features. With the recent understanding of punctuation as a rule-governed system in its own right, rather than as an artifact treated indirectly or filtered through other levels of linguistic inquiry like syntax, comes the ability to claim punctuation as a singular object of study in research. This might, but need not, extend beyond the workings of the suite of punctuation marks.

Also of particular interest is the potential for linguistic research on punctuation to provide insight into cruxes of textual scholarship based on historiographical concerns. Inadequate understanding of punctuation at a particular synchronic stage of the language (herein, English) is not a new problem in literary analysis. But the reality remains that most modern readers— and, to a lesser extent (one hopes), textual scholars— are limited by their own linguistics in that they inevitably read in reference to modern punctuation. Kellogg and Steele (1963) raise this crucial historiographical point when they caution against analyses

built on hasty— or, as they write, "sanguine"— generalizations like 'punctuation marks syntax' or 'punctuation marks intonation':

The critic cannot afford to work on the assumption that Spenser's syntax can be explained by analogy with similar but not identical structures in present-day English. Two considerations must temper our hasty analysis of Elizabethan poetry: first, we do not understand Elizabethan syntax thoroughly; and, second, we do not know what intonation was used to signal syntactical relationships.⁸

One might add to their point a further concession: even if we do achieve an accurate reconstruction of Elizabethan syntax and phonemics, we cannot assume the poet operated within those conventions or norms. Moreover, Kellogg and Steele's stance presupposes that punctuation in a poem is limited to demarcating syntactic constituents and transcribing the prosodic features of inner speech. A critic cannot afford to work on that assumption either.

A more accurate approach would examine punctuation, syntax, and phonemics independently and not as mixed-levels— but, rather, as phenomena that are interrelated but not dependent on or subservient to one another. It would be informed by a reconstruction of Elizabethan syntax and phonemics as well as a reconstruction of a grammar of Elizabethan punctuation. What might such an approach look like? Placing a consideration of Elizabethan syntax and phonemics aside, a series of corpus-based studies on punctuation conducted in the following contexts would yield multiple and increasingly marked perspectives on punctuation as it functioned in the target time-period:

- Elizabethan texts (including newspapers, legal documents, and other non-literary publications);
- Contemporary Elizabethan poetry;
- As well as a more concentrated analysis of punctuation in the poet's own writings (which would consider works in prose and works in poetry separately).

Computational linguistic techniques allow such corpus searches to be exacting. In the style of Karlsson (1994), it is possible to determine the statistical frequency of, say, an ellipsis separating a verb and its subject, or the probability that the word preceding an em dash is in the nominal case when the word that follows is a finite verb. Admittedly, exhaustive corpora for this type of research will not be avail-

able in all cases. Already, though, digitized corpora for various genres of literary texts or author-specific databases exist. If and when corpora become available, though, applying computational linguistic techniques of the kind detailed by Say and Akman (1967) seems like a useful but unexplored resource for literary studies.

Accommodating a linguistic theory of punctuation—formal, as in Nunberg’s case, or distributional, as in Karlsson’s— to literary analysis might provide the literary critic with surer footing while navigating historically remote punctuation systems. A body of research that examines punctuation in this manner offers to the critic and textual scholar a hereto-unavailable interpretive tool. It would allow for cross-comparison between the poet’s deployment of punctuation and statistical patterns or norms of punctuation in use in the particular socio-cultural milieu in which he or she was writing.

In this way, the critic or scholar could more easily, and more systematically, decenter a reading of a text from his or her own linguistics of punctuation. Historiographer of the language sciences Konrad Koerner (1997) points to the value of a similar process of re-orientation or recalibration when approaching non-contemporary (linguistic) texts: “[M]odern scholars have been misled in their assessment... probably because they could not or did not divest themselves of their own twentieth-century structuralist background.”⁹

A similar concern holds true for an analysis of punctuation in poetry. A critically responsible treatment of a poem’s punctuation recognizes that reading only with reference to contemporary punctuation results in a limited interpretive stance, and also constitutes a critical move based on presupposition. The critic might work around this logical fallacy by drawing on the technical apparatus of computational linguistics to equip him- or herself with descriptions of: contemporary punctuation, punctuation in the target time-period, and punctuation within the body of work being examined. Only by refracting a historically displaced reading of the poem through these multiple lenses can we hope to achieve a more historiographically sound and interpretively accurate assessment of the working of the poem’s punctuation.

This paper does not propose a unified theory of punctuation, or even attempt to define in detail how such a theory might be applied to literary criticism or textual

scholarship; the current lack of research makes this unlikely. Rather, it aims to draw attention to the general paucity of research directed at constructing an empirical theory of punctuation for use in both linguistics and literary studies. And, furthermore, to suggest the utility of such a theory and its compatibility between recent efforts in computational linguistics and the recognition in literary studies, especially among scholars of poetry, that punctuation warrants attention as a non-verbal resource of creative expression.

Present understanding of punctuation as a subsystem of human language is inadequate. Even when studies do examine punctuation from a linguistic standpoint, they privilege modern written language and American English in particular. Moreover, the application of these studies beyond their use in natural language processing systems and punctuation pedagogy is unexplored, their relevance to literary analysis undocumented. What wants in literary studies is a body of research that approaches punctuation linguistically— making use of corpus and computational methods of analysis— in order to attend more accurately to the particularities of its workings in poetry.

ENDNOTES

1. Akman, Current Approaches to Punctuation, 464.
2. Ibid.
3. Akman, Current Approaches to Punctuation, 460.
4. Ibid.
5. Akman, Current Approaches to Punctuation, 467.
- 6 Pullum, Natural Language and Linguistic Theory, 421-422.
- 7 Akman, Current Approaches to Punctuation, 461.
- 8 Kellogg, On the Punctuation of Two Lines, 174.
- 9 Koerner, Einar Haugen, 228.

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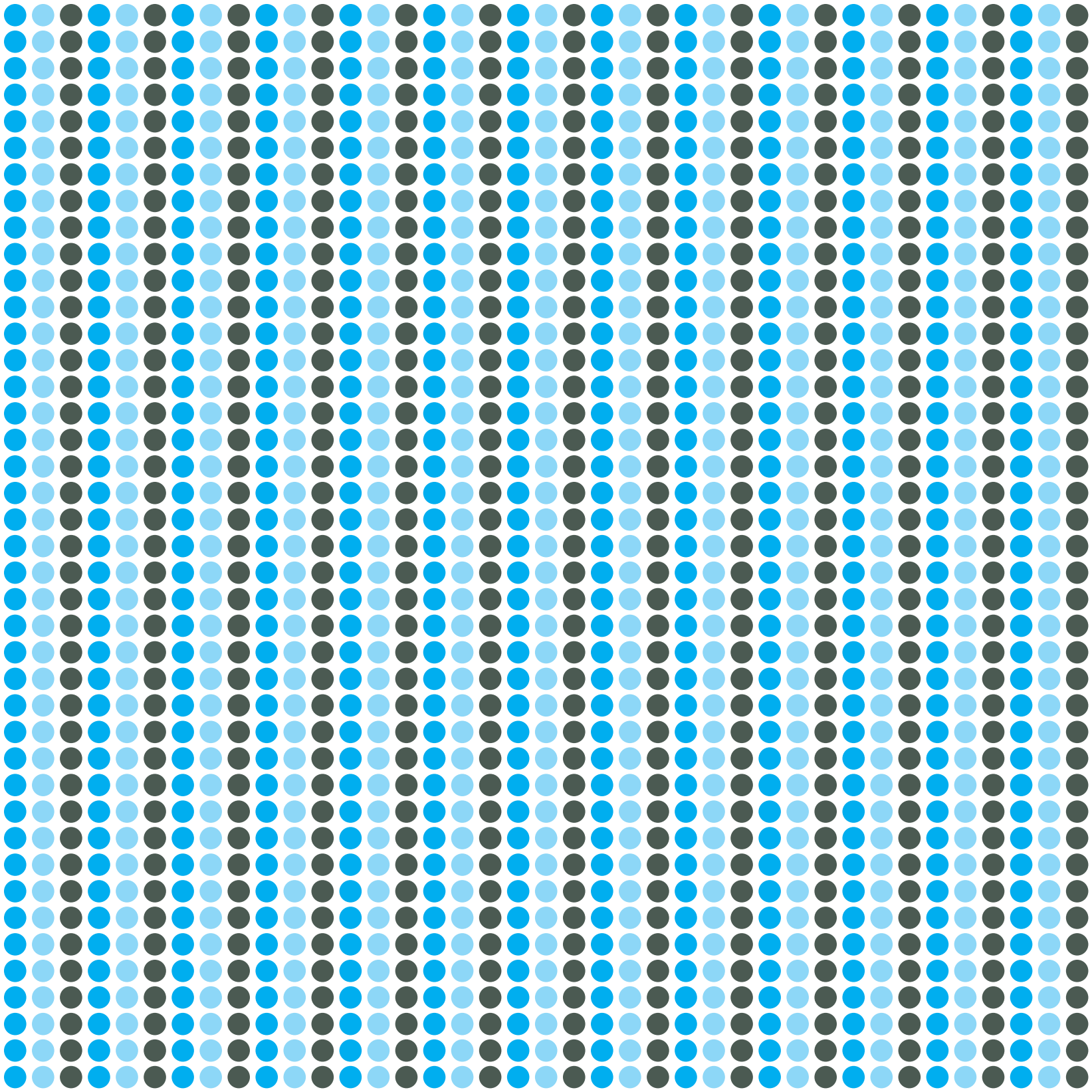
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LATINO MASCULINITY

Underlying Factors in College Persistence Levels

MARIA VASQUEZ

DESPITE GROWING NUMBERS, LATINOS LAG BEHIND WHITES IN HIGHER EDUCATION. THIS GAP IS ESPECIALLY SALIENT FOR LATINO MEN, WHO EARNED ONLY 37.6 PERCENT OF ASSOCIATE'S AND BACHELOR'S DEGREES AWARDED TO LATINO STUDENTS IN 2010. THE FOLLOWING STUDY USES INTERVIEWS WITH THIRTEEN ETHNICALLY DIVERSE, FIRST-GENERATION, SELF-IDENTIFIED LATINO MEN CURRENTLY ENROLLED IN FOUR-YEAR UNIVERSITIES IN THE GREATER BOSTON AREA TO EXPLORE THE INFLUENCES LATINO MEN IDENTIFY AS IMPACTING THEIR COLLEGE SUCCESS AND PERSISTENCE RATES. GROUNDED THEORY ANALYSIS OF THE INTERVIEW DATA REVEALS THE CORRELATIONS BETWEEN PREVIOUS ACADEMIC EXPERIENCES AND FAMILY INFLUENCE ON PARTICIPANTS' ABILITY TO GRADUATE. THE PARAMOUNT ROLE OF PARTICIPANTS' CULTURAL CONSTRUCTIONS OF MASCULINITY AND THEIR EFFECT ON HELP-SEEKING BEHAVIORS WAS A SURPRISING AND UNIQUE FINDING. MASCULINITY AND HELP-SEEKING BEHAVIORS WERE, THEREFORE, FOUND TO PLAY A KEY ROLE IN COLLEGE ACHIEVEMENT AND PERSISTENCE FOR THE MEN IN THIS STUDY. THIS ARTICLE ALSO DISCUSSES IMPLICATIONS FOR MENTAL HEALTH PRACTITIONERS, EDUCATIONAL ADVOCACY GROUPS, AND UNIVERSITIES.

INTRODUCTION

Latinos are growing in number and influence in the United States. By 2050, Hispanics/Latinos will comprise 29% of the population.¹ Despite growing numbers, Latinos lag behind whites in higher education, with only 13.5% of associate's degrees and 8.8% of bachelor's degrees being awarded to students identifying as Latino or Hispanic in 2010.² Moreover, only 37.6% of associate's and bachelor's degrees were awarded to students who identified as male and Latino.³ The discrepancy between Latino female and male college enrollment and graduation rates is linked to sociocultural factors, such as gender roles, socioeconomic status, criminalization of the Latino male, and neighborhood and environmental contexts. This paper investigates the academic, social, and psychological factors that influence Latino males' decisions about postsecondary education and the implications of these decisions.

LITERATURE REVIEW

Despite the recent increase in research about ethnicity and higher education, there remains a large gap in the literature on Latino men in college. Ojeda, Navarro, and Morales⁴ documented the link between family, identity, and college persistence intentions for Mexican-American men, concluding that, given the family's centrality to gender identity, high parental involvement positively impacted college persistence intentions. The strong relationship between Latino male identity and the concept of family has been established not only for Mexican-Americans, but also for Latinos of all ethnic backgrounds.⁵ Specifically, the importance of "familismo," which "encompasses the loyalty, commitment, and dedication to "la familia" is repeatedly identified in the literature as a significant influence on Latino consciousness.⁶ Latino males are expected to support their family financially and emotionally—a reality that undeniably affects their educational, professional, and personal development.⁷ The concept of family can be a double-edged sword, providing extensive support and positive involvement for Latino male college students, but also de-

manding a level of commitment that often interferes with college persistence.⁸

The complex topic of Latino male college persistence involves the interrelation of a variety of systems and factors. The literature identifies four prevalent themes that have large influences on Latino males' college access and completion: (a) level of awareness of educational obstacles on the part of communities and administrators; (b) the importance of the concept of family; (c) the impact of male peers and mentors; and (d) the absence of outreach programs specifically designed for this population.⁹

Clark et al.'s study on educator perspectives on Latino male educational pursuits reveals "the strong influence of the Latino patriarchal and cultural norms imposes unique demands and expectations on Latino men."¹⁰ Family pressure to fulfill the male role, paired with institutional and financial barriers to Latino male college access and retention create an environment unsupportive of Latino males' educational pursuits. Researchers also found that peer and mentor relationships can enhance success and persistence of Latino men in high school and college. Understanding the unique cultural experience of Latino males is a key component of Latino success in higher education.

Contextual variables contribute to the lack of Latino male access to higher education. Administrators and students identified failing high schools (lacking in materials, committed teachers, mentors, helpful counselors) and home environments with little to no knowledge of the college admission and application process (financial planning and aid for college, university culture, etc.), as serious impediments to getting into and persisting through college.¹¹ Both the challenging nature of the college application process and the lack of awareness of opportunities available hinder Latino males' college attendance and completion. Negotiating the financial stresses of college, acquiring financial aid, and paying for school without familial help work to create an "uphill battle".¹²

“Despite growing numbers, Latinos lag behind in higher education, with only 13.5% of associate’s degrees and 8.8% of bachelor’s degrees being awarded to students identifying as Latino or Hispanic in 2010.”

Numerous psychological factors strongly impact Mexican-American students' decisions to pursue and obtain a college degree.¹³ Precollege racial micro-aggressions and family pride are significant factors in Mexican-Americans' intentions and abilities to complete college. Cerezo et al. documented that teachers, administrators, and peers discouraged college aspirations, claiming that college would be "too difficult," that Latino male students would not be "capable," or suggesting that they join the military, attend a trade school, or even "engage in criminal activity".¹⁴

Although the literature identifies issues that Latino students face in accessing college, it is primarily focused on Mexican-American college students. While Mexican-Americans are the largest of the Latino populations in the United States,¹⁵ it is essential to gather information from a diverse and nationally representative sample to make generalizations concerning Latinos as a whole. Secondly, student voices are lacking in the literature. Scholars, administrators, and psychologists discuss Latino males' college persistence, but there are very few studies in which Latinos themselves speak on the issue. The role of methodology is crucial here. Few studies are qualitative and provide space for students to voice their experiences in all their nuanced complexity.¹⁶

The present study explores a more diverse group of male Latino college students' constructions of the factors that influence their ability to complete a college degree. It seeks to provide an opportunity for Latino males to talk about their access to college, their challenges once there, and their understandings of how their identity and cultural background influence whether or not they graduate.

METHODOLOGY

The purpose of this study is to understand how Latino men define the obstacles and challenges they have encountered or are currently experiencing in their attempt to complete a college degree through the lens of a sociocultural framework. In other words, what factors do Latino college males describe as impacting their educational options, decisions, and experiences?

Thirteen self-identified Latino men between the ages of 18 and 23, currently enrolled in four-year universities in the Greater Boston area, were individually interviewed using a semi-structured interview. Participants attended predominantly white, private, four-year institutions. Using a snowball sampling method, 2-3 original participants reached

out to other Latino men who were interested in participating in the study. This sampling method allowed a transfer of trust between participants and researcher, an essential component to the ability to gather valid and reliable data.¹⁷ Participants were screened for ethnic background to ensure diversity in the final sample, which consisted of mostly American-born Latinos with ethnic ties to Mexico, El Salvador, Colombia, Puerto Rico, Cuba, the Dominican Republic, and Guatemala. One participant was born in Puerto Rico but immigrated to the United States at the age of ten, while another self-identified as a second-generation Chicano. Participants attended high schools in California, Florida, Texas, Massachusetts, Connecticut, and New York. All identified as low to low-middle income.

Given the study's inductive nature, interviews were conducted in a flexible format, relying on prepared questions as guiding points. If the participant felt strongly about a topic, focused on certain themes, or even raised a new perspective, the interview would be directed towards that particular topic. Thus, data elaborate on and deviate from the literature to keep the process open to fresh perspectives and understandings.¹⁸ The focus of this study was how the individual men understood and constructed the obstacles and challenges to completing a college degree, and an open-ended interview ensured that participants had the space and opportunity to explore and share experiences freely. Interviews ranged in length from twenty to ninety minutes and were recorded and transcribed with signed consent from participants. Coding was informed by themes found in the literature,¹⁹ and revealed themes that



STUDENTS MARCH IN WASHINGTON FOR THE CAUSE OF AFFIRMATIVE ACTION IN AMERICAN HIGHER EDUCATION. (COURTESY OF WIKIMEDIA COMMONS)

matched those found in the literature review as well as other themes not discussed at all in the literature. The names of participants in this study are pseudonyms.

RESULTS

Findings addressed academic preparedness, family dynamics, and gender roles. There was also an emphasis on gendered understandings of help-seeking behaviors that were specifically relevant to college navigation, success, and well-being. In this research, “help-seeking” includes academic assistance (tutoring, professors office hours, etc.), career and fiscal advising (additional funding needs, etc.), and psychological assistance (stress management, emotional support, etc.), in both formal (professional) and informal (peer and family network) settings. Refer to Table 1 for a guide to theme incidence by interview.

Previous Academic Experiences

Participants identified high school environments and interactions as strong influences on perceptions of college

access, academic preparedness once in college, and awareness of resources and services supporting college transition. The academic rigors of college contributed to participants’ beliefs about self-efficacy, as participants explicitly feared they would not be able to overcome poor preparation, thus creating a sense of inadequacy and failure. Limited prior exposure to academic supports exacerbated feelings of inefficacy and hopelessness, and participants highlighted the importance of resource awareness and willingness to access resources as essential to academic progress and success.

Family Influence

Family factors contributed to participants’ conceptions of education, success, and well-being. Enrolling in college was not a personal choice for personal success, but a choice to provide a better future for the participant, parents, and future family. The role of the family was paradoxical — family encouragement and support were important to participants’ intentions and decisions to attend and persist through college, but family expectations and re-

	<i>Previous Academic Experiences</i>	<i>Family Influence</i>	<i>Masculinity/Gender Roles</i>	<i>Help-Seeking Difficulties</i>
<i>Interview 1</i>	x	x	x	x
<i>Interview 2</i>	x		x	x
<i>Interview 3</i>		x	x	x
<i>Interview 4</i>	x	x	x	x
<i>Interview 5</i>		x	x	x
<i>Interview 6</i>	x	x	x	x
<i>Interview 7</i>	x			
<i>Interview 8</i>	x		x	x
<i>Interview 9</i>	x	x	x	x
<i>Interview 10</i>	x	x	x	x
<i>Interview 11</i>	x	x	x	x
<i>Interview 12</i>		x	x	x
<i>Interview 13</i>	x	x	x	x

TABLE 1. THEME INCIDENCE PER INTERVIEW

sponsibilities negatively influenced graduation rates. Participants talked about financial stresses and the expectation of taking care of the family as potential barriers to college persistence.

Masculinity

Gender played a significant role in how Latino males situated their education in relation to identity, family, and their future. Participants perceived education as necessary for the financial independence and security needed to support a family. While some participants wanted future partners to be financially independent, most identified the male as the primary provider. Self-sufficiency and success in the primary provider role were essential to how these men made decisions about their education.

Masculinity also played a major role in how participants sought help during college. Participants' constructions of masculinity blended traditional Latino constructions of gender with mainstream American notions. This "Americanized machismo" acknowledges self-sufficiency and independence, and when integrated with a multicultural construction of gender, strongly influences how these men viewed formal and informal help-seeking. Gender policing in the Latino community also discouraged help-seeking considerations and behaviors.

DISCUSSION

The role of the family and the importance of access to resources in high school and college for first-generation college students were significant points for many participants. The lack of secondary school resources rendered not only the college application process, but also the transition to college life, difficult. Andres, a sophomore, illustrates this point:

I didn't know that you could get free tutoring...I didn't know that there were people on campus that you could go to and talk to and try to appeal a financial aid decision. None of that stuff was available to me in high school, so the possibility that they would be available in college...didn't even cross my mind.

Andres' experience showcases how a prior lack of access to resources and assistance continues to affect individuals even as they enter more encouraging environments.

Family support and expectations for higher education permeated the discussion on what influenced participants' goals of going to college. Participants emphasized the need "to achieve what my parents were never given the opportunity to achieve. I was born here [in the United States] so...there was no reason for me not to go to college—if I wanted to succeed." Attending college and receiving a diploma could realize the value of parents' hard work. Families demanded that sons avail themselves of American privileges. This theme pervaded all interviews. One participant talked about his family's immigration to the United States in this context, explaining how his parents struggled with the most difficult jobs, and that "Going to college meant showing them that all they had sacrificed was not done in vain. My job was to get to college and I did." Obtaining a college degree seemed to be individually and family-motivated; participants identified the benefits of a college education as the main incentives behind enrolling in, and graduating from, college.

The intersection of gender and culture was the most critical theme. Participants deconstructed their journeys to college and during college within the context of their identity as Latino men, noting how gender and culture shaped their conceptions of education, success, and ability. Gender construction, defined by one participant as an "all-consuming way of thinking that tells you how you have to live as a man," shaped participants' personal and professional aspirations. Attending college was not only something that participants felt they owed their parents, but also something that ensured financial success for themselves as male role models.



ONCE AT COLLEGE, LATINO MALES OFTEN STRUGGLE TO ACCESS RESOURCES AND SUPPORT. (COURTESY OF WIKIMEDIA COMMONS)

Definitions of success included the ability to “support my family, have a house, and take care of my wife and kids... My parents always told me that I needed to be able to take care of my family—I need to be the provider and college will help me to do that.” The concept of family itself, for many of the participants, corroborated the literature on the concept of familismo. Interviewees perceived an expectation of responsibility, not only to future families, but also

“This ‘Americanized machismo’ acknowledges self-sufficiency and independence, and when integrated with a multicultural construction of gender, strongly influences how these men viewed formal and informal help-seeking.”

to parents and siblings, which extended particularly to female family members. As David, a senior, shared, “If something were to happen to my father, or any of my brothers, I would have to take care of my mother and sisters—it’s just what I would have to do—it’s what would be expected of me and what I would expect, too.” This self-imposed obligation to support family members, and to support women specifically, reinforces “Latino male as provider” as an integral component to Latino male identity.

This concept is also closely linked to being “the man of the house.” Most participants identified a direct expectation from family members, both male and female, to fulfill this role by virtue of being a male in the home. “When my dad died...my mom told me that I was the man of the house now...I had to be strong and take care of the family,” shared Gustavo whose father died when he was nine years old. “Those words stayed with me—I still feel like I am the man the house, like I have a family to take care of, like... this [college] isn’t just about me, you know?” The interplay of gender-based family expectations and success yielded very specific reasons why Latino men were in college. Going to college, therefore, meant guaranteeing their ability to assume the role of provider and support current and future families. Such interplay created a paradoxical effect: a motivator to college success in the face of positive family involvement and support, became a stressor in the face of family hardship and adversity.

Participants’ constructions of masculinity were at the crux of the conversation on college achievement and persis-

tence. Participants branded the ideal Latino man as possessing qualities that coincide with traditional masculine norms, such as independence, virility, emotional control, industriousness, aggression, and dominance.²⁰ Yet, participants identified Latino masculine norms to be “exaggerated” and “much more intense.” As Benny noted, “Latinos have very clear separations between men and women. It’s very traditional in a sense and not open for negotia-

tion.” Gender roles in the Latino community are closely tied to cultural identity and social practice where, “being a man is not thrust upon me, it’s shown to me. I know I will make them proud if I [imitate].”

Women also sustain and adhere to these conceptions of Latino masculinity. Leal, a junior, explained that his mother instructed him how to be a man: “be strong...stand up and dominate—to not let anyone disrespect or put me down. My father wasn’t around and so she said I had to be strong for her and the family.” His aunts and sisters agreed: “men can’t cry, they have to provide, they have to be tough.” Cousins and sisters considered a man who was not in control unattractive because he “wasn’t acting like a man should...it’s a cultural thing.” Gender roles are so entrenched in the Latino community that women uphold and co-construct them in spite of growing support for gender equality and a movement away from the traditional, and often destructive, understandings of gender in the Latino community (as cited by other participants). A few participants shared how some people are challenging gender norms in the Latino community, but these individuals seem to be the exceptions.

Messages and lessons about gender during upbringing affected the development of participants’ individual and relational identities. Identities as individuals were closely linked to communal identities as Latino men, with integrated personal identifiers and tastes: “I like cars, and there are a lot of guys in my family that also like cars. We bond over that, you know. I like cars because they’re dirty and

hands on and fast and kind of dangerous—all of us [Latinos] just like that [stuff].” Gender and gender identity inform decisions and impact the choices and experiences of Latino males in the college environment.

All but one participant identified help-seeking in relation to masculinity as a major determinant of success in both the academic and socio-emotional domains of college. Asking for help was an essential but difficult behavior. What it meant to be a Latino man clashed with the willingness to engage in help-seeking. “A man has it all together, doesn’t need to ask anyone for help—they’re independent and strong and have it all under control,” shared Cesar, a sophomore, “you go for help and...I know it sounds stupid, but, it’s almost like you are no longer a man.”

Academic help-seeking was defined as going to professors’ office hours, building mentoring relationships with campus leaders and administrators, and accessing resources like tutoring and academic advising. Seeking academic help resulted in psychological and social difficulties. Cesar explains that the most profound obstacle to help-seeking is his reluctance to admit that he is having a hard time: “If I admitted that I needed help [then that] meant that I didn’t have everything under control—that I needed somebody else to help me out, to do what I couldn’t”. Taught to be independent, Cesar viewed asking for help as losing self-sufficiency. “I definitely didn’t want my friends to see me struggling—they looked like they had it all together and I pretended to, too.” Help-seeking as dependency was common among most participants and clashed directly with internalized constructions of masculinity—signaling not only a lack of independence but also a suggestion of failure.

Gender policing, a social phenomenon that imposes normative gender expressions on individuals who are perceived to be non-conforming to the expectations of their perceived sex,²¹ was especially notable among Latino men. Hyper-policing of gender systematically prevailed in the Latino community. As one participant shared, “You start acting a little funny, like too sensitive or like you care too

much about a girl or a test or something, your [Latino] friends will check you...they’ll let you know you’re not being a man and they won’t let you live that...down.” Another participant agreed: “My Latino friends are so much more obsessed with acting manly and being stereotypically male than any of my other non-Latino friends.”

This hyper-policing also affects socio-emotional, help-seeking behaviors. “You can’t be weak—you don’t cry, you don’t let people get you vulnerable...you act strong and you keep your cool. The only time you let emotions get in the way is when someone disrespects you or your loved ones.” The expectation of emotional stoicism is critical to Latino men’s psychological well-being; needs are shrouded to present the façade of incontestable “maleness.” Participants talked about facing stress, anxiety, emotional, and interpersonal problems during college but not feeling comfortable disclosing such experiences to anyone because of the dissonance between emotional expression and male identity. Such issues were handled privately and independently:

When I feel stressed out, or something is going on with my family or a girl, I just go and hang out by myself. I deal with it myself. I don’t need anyone to listen to me—I don’t like talking about my feelings. I just feel uncomfortable doing it... I don’t know how to go to people and talk to them about my private life—I can’t even describe how I feel sometimes to myself, how am I supposed to go and do that with someone who will probably just judge me for it?

Fear of judgment and gender-policing prevented many participants from self-disclosing and encouraged them to distinguish between support networks in their lives.

Several men discussed talking to certain friend groups about specific problems depending on whether or not those friends ascribed to prevailing Latino understandings of masculinity. Peter, a freshman, shared, “I go to my white guy friends about an issue with a girl or about feeling stressed out. They are so much more open to that kind of stuff. When I go to my Latino friends, they just make a

“My Latino friends are so much more obsessed with acting manly and being stereotypically male than any of my other non-Latino friends.”

joke out of everything.” Corroborating Peter’s sentiment, Joseph shared, “My Latino friends just make jokes...they tell me to man up and that everything will work out fine—but sometimes you just need someone to say they understand how you feel and that it’s okay.” Dealing with emotional or psychological needs through humor was also prevalent. The fact that Latino men felt more comfortable talking about emotional topics with non-Latino friends amplifies the validity of exploring Latino males’ concepts of masculinity and gender-policing and their effect on college persistence.

Participants identified emotional and relational difficulties as having a negative impact on academic involvement and achievement. Not talking about stress and feelings led to distress and inadequacy: I was too easily overwhelmed, I felt so much pressure; school just started to become harder and harder for me. Believing that he had to do everything himself, one participant remarked that, “any challenge that comes your way becomes ten times bigger, ten times harder to overcome, ten times more likely to break you down.” Latino males identify help-seeking as especially pertinent to college persistence, and this shows that help-seeking is relevant not only academically, but also socio-emotionally. Help-seeking seems to be a critical variable in the context of Latino men’s low rates of college persistence.

LIMITATIONS OF THE PRESENT STUDY

There are several limitations of this study. First of all, the small sample size prevents generalizability of findings, and the snowball sampling method, albeit necessary in transferring trust, can result in a sample that is homogeneous in terms of experiences, values, and beliefs. A study that uses a random probability sampling method would limit such a risk. Another limitation is the unique educational make-up of the sample. Given that all participants derived from predominantly white, private universities, findings cannot be linked closely to the experiences of students at public or more ethnically diverse university settings. The general environment of the university and the presence of greater academic and social supports for Latino men may have influenced the shared experiences of the current study’s participants.

STRENGTHS OF THE PRESENT STUDY

The paucity of literature that includes ethnically diverse Latino male voices on the topic of college persistence was a significant motivator for this study, and thus contributes

to the literature by including an ethnically diverse sample in an in-depth, qualitative exploration. Participants shared experiences, perspectives, and understandings in a way that validated their contributions.

This study also reflects the present demographics of a significant portion of America’s Latino population. Participants’ ethnic ties reflect the majority ethnic composition of the Latino population in the United States, and their identification as first-generation also reflects the immigrant make-up of Latinos between the ages of 18 and 25.²²

CONCLUSION

Constructions of masculinity appear to be the most salient influence on Latino male enrollment and persistence intentions in college. Despite the importance of resources and support services in high school and universities, participants described their struggles in college as primarily influenced by their understandings of identity and masculinity in a cultural context. Participants’ positionality as first-generation Latino-Americans enabled a gender identity constructed as a hybrid of both American and Latino cultural influences in an “Americanized machismo” paradigm.

The inflation of gender roles in the Latino community creates an environment of hyper-gender policing that restricts many Latino men in college from engaging in behaviors that would threaten their masculinity, even when such behaviors might ensure academic or personal success. Masculinity as a performance, relevant and established in the literature,²³ seems to be more significant for Latino males. Furthermore, the interplay of gendered identity constructions and help-seeking behaviors was a significant finding. Participants explicitly related internalized understandings of masculinity to their inability to engage in help-seeking behaviors, yielding a dynamic with very noticeable academic, financial, and psychological ramifications. Obstacles pertaining to academic and financial help-seeking, attending professors’ office hours, making use of on-campus tutoring resources, seeking financial aid advocates, etc., have to be overcome for Latino males to logistically make it “through” college.

The socio-emotional, psychological piece of help-seeking was particularly critical. Cultural conceptions of what it means to be a man were closely linked to psychological and emotional well-being, undoubtedly important factors in college persistence and success. Participants’ unwilling-

ness to seek help in all domains for fear of losing their masculine appearance, in addition to their refusal to obtain emotional support from friends, significantly undermined their academic performance and psychological well-being. Participants explicitly linked their emotional and psychological health to feelings of self-efficacy and motivation for college completion. This reveals the expected finding that masculinity plays an important role in mental health, which is essential to college persistence.

IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The current study provides evidence for the complexity of factors that influence Latino men's college persistence levels. Improving high schools and universities to better address Latino men's unique academic and social needs is crucial to ensuring higher college graduation rates. Validating and understanding the significant role of the family in the lives of Latino men and its influence on their academic and professional decisions must be a tenet of any intervention or outreach program that aims to work with this population. Additionally, understanding the role that masculinity plays in Latino male identity development and definitions of appropriate and inappropriate help-seeking behaviors is vital for educators and psychologists, if they seek to improve up the low rates of Latino male degree attainment. Finally, future research should further explore the intricate relationship between masculinity, help-seeking, and psychological distress. Participants noted psychological well-being as critical to college success and persistence, and yet, they are unwilling to seek support. Exploring the causes of such contradictory behavior may uncover ways to develop a more productive synergy between gender identity, help-seeking behaviors, and academic, social, and emotional well-being among Latino men in college.

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DISSENT IN THE WIRTSCHAFTSWUNDER

Historical Memory and the German Student Movement

ALEC WALKER

THIS PAPER DEALS WITH THE WEST GERMAN STUDENT MOVEMENT, WHICH, LIKE MOST STUDENT MOVEMENTS, WAS ACTIVE IN THE 1960S AND FOCUSED PRIMARILY ON SOCIAL ISSUES. IT ATTEMPTS TO INTERPRET THE CRITIQUES LEVIED BY THE MOVEMENT IN RELATION TO THOSE EVENTS AND THOUGHTS WHICH PRECEDED IT. THE AUTHOR ARGUES THAT THERE WAS A DISTINCT RHETORICAL AND PHILOSOPHICAL CONNECTION BETWEEN THE 68ER-BEWEGUNG AND THE CRITICAL THEORY OF THE FRANKFURT SCHOOL. THIS CONNECTION SHAPED THE METHODS AND GOALS OF THE STUDENT MOVEMENT, WHICH SOUGHT TO INTEGRATE A PROCESS OF COMING TO TERMS WITH THE REALITIES OF GERMANY'S FASCIST, ANTI-DEMOCRATIC PAST INTO THE GERMAN MINDSET FOLLOWING THE RICH PERIOD OF REMARKABLE POSTWAR ECONOMIC DEVELOPMENT. THESE METHODS AND INFLUENCES, WHICH ARE CALLED "CRITICAL HISTORICAL MEMORY," ARE THEN ARGUED TO HAVE BEEN DEPLOYED SO AS TO BRING TO LIGHT THE CONTINUED PRESENCE OF FASCISTIC TENDENCIES IN CONTEMPORARY GERMAN POLITICS, WITH THE HOPE OF COMING TO TERMS WITH THE RECENT PAST.

The writings, speeches, and pamphlets of the German student movement display a contemporarily unique approach to historical memory. The period following World War II called for a historical reckoning of recent events in Germany. Due to conditions on the ground, however, such immediacy was either made impossible by turmoil or forced and subsequently repressed by denazification. Given its ostensibly democratic structure and ideals, Western Germany seemed positioned for a reckoning of memory and conscience with the dawn of a new sovereignty in the mid-1950s. As Konrad Adenauer and his administration regained the reigns of governance, though, the extent to which a recovery of conscious, critical historical memory occurred is unclear. While West German economic standards rose rapidly to levels similar to their Western allies, it is not evident that there was any discourse aimed at coming to terms with the fascist, antidemocratic tendencies that had until recently carried so much political and cultural clout. Indeed, in the nexus that became known as the German student movement, or the 68er-Bewegung, the criticism that the recovery to date had been merely material and disturbingly ahistorical is brought to light. In this sense, the German student movement can be interpreted as movement of critical historical memory.

An outline of this concern is found in a speech titled “The Students and the Revolution,” delivered by Rudi Dutschke, a figurehead of the movement. Dutschke stated that, “In the fifties the Left in West Germany believed that capitalism no longer contained any contradictions.”¹ The old guard, Dutschke claimed, had acquiesced too readily to an easy definition of progress, a superficial economic solution that attempted to pave over the problematic parts of recent history. To understand both Dutschke’s speech and the movement it epitomized, one must observe the insistence on historical memory that spurred the movement’s inception, how this concern impacted the movement’s means of demonstration, and to what degree it was successful in its complicated conclusion.

The fact that critique of recent history occurred in German universities is, in one sense, historically expected. In Western Germany, between 1960 and 1966, there was a precipitous rise in the student population from 195,000 to 281,000, resulting in overcrowded facilities and reduced contact with faculty.² While this would be cause for alarm in any political climate, it resulted in particularly shocking outcomes in Western Germany due to a number of factors external to the university. The student body felt stifled and politically impotent. As Willibald Karl notes in *The Journal*



1968 HAMBURG LEHRLING DEMONSTRATION (COURTESY OF WIKIMEDIA COMMONS)

of Contemporary History, the student unions of various German universities “proved [themselves] incapable of meeting the needs of the students or of getting their demands accepted.”³ As a result, the students sought political means of recourse — specifically in the socially liberal, and classically socialist, Sozialdemokratische Partei Deutschlands (SPD.) However, the SPD, in its 1959 party convention, had abandoned its classical Marxist views in favor of a capitalistic, social market economy platform, beginning a process of what Michael Schmidtke of the University of Bielefeld termed “de-ideologization.”⁴ Those ideals, historically crucial to liberal student politics, were being actively abandoned. It was these first sparks of agitation that originally ignited the German student movement, represented by the Sozialistischer Deutscher Studentenbund (SDS) and a number of other attendant extra-parliamentary agencies.

Unlike many protest movements of the past, the body of the SDS was not foreign to the rulers they criticized. As a result, “the dominant parent culture...sensed that this protest movement [was] emerging from its own center — the middle class.”⁵ They emerged as an educated and engaged contingent, which felt society was partaking in mass historical repression. The students’ initial discontent, contained and pressurized in the universities, was fanned further by the winds of the 1960s. By 1966, the new SPD had formed a grand coalition government with the more conservative Christlich Demokratische Union Deutschlands (CDU), making it “nearly impossible to articulate opposition views outside of the two dominant political parties.”⁶ The new coalition enacted policies

showing no regard for recent history, proposed by leaders implicated in the recent atrocities of National Socialism. Kurt Georg Kiesinger was accepted as Chancellor, despite his involvement in the Third Reich, and Franz Joseph Strauß was appointed finance minister, despite his numerous attempts to limit the free voice of the German press.⁷ The appointment of these men, readily indictable of antidemocratic activity, appeared as a flagrant dismissal of history in the eyes of the students, and the policies they sought to pass appeared reminiscent of times both recent and repressive. With precisely these concerns in mind, the students criticized the proposed emergency laws of the grand coalition, which would endow the government with overarching power in times of vaguely defined “crisis,” due to their similarity to the Weimar laws of the 1930s.⁸ Politics at large seemed at best conservative, at worst regressively forgetful. As Belinda Davis of Rutgers University notes, a variety of obstacles caused the students to create their own sphere of thought. This independent space allowed “alternative modes of living...offering protection from repression,” a place where they could critically address the present and, ultimately, the past.⁹

Here, then, is the scent of the real issue, by which the student movements can be understood as engaging in a discourse not only on the present, but also on the not-distant past — a generation’s reaction to the reviving of a smell repressed, and their insistence that it not be perfumed. Their critique, and the sphere they created to propagate it, began to expand intellectually beyond the present situation in the universities to the images and memories of fascism lingering in society at large, which, in Sabine Von Dirke’s words, “overshadowed the democratic-humanitarian rhetoric of mainstream West Germany with which the youth had grown up.”¹⁰ In this sense, the students’ insistence on recalling the “functions of fascism” in the 1920s and 1930s can be understood. Dutschke’s indictment that “After the second world war a new form of fascism” arose can also be interpreted through this perspective.¹¹ Fearing a revival of authoritarian principals, the students, barred from parliament and the orthodox university, founded a critical perspective backed by their own interpretation of recent history. The core methodological backings of the move-

ment were, in their very nature, a recollection of recent intellectual history. Much of the movement’s method was based upon the revival of the Frankfurt School, that famous house of Critical Theory, which had been “partially lost due to Nazism and partially repressed.”¹² Theodor Adorno, a member of the Frankfurt School contemporary to the student movement, surmised the student’s opposition to authoritarianism when he wrote of “the bestial fury of the Brownshirts” against those critical of them as the “incursion of the wild horde into the preserve of the mind.”¹³ The reader does not miss the historicity of the phrase, in its explicitly critical memory of National Socialism. But Adorno went further, diagnosing modernity, explicating a mood, and endowing the students with a guiding method, when he stated that the critic would “have willingly excelled the less clever tyrants who were to succeed him”, arguing that the once usurped critic now reigns rather than thinks; it was the students’ contention and expansion that this is a particularly apt analysis in the realm of politics.¹⁴ The goal, then, was to actively keep the past of fascism in mind as a means of critiquing the present. The movement’s very method was a historical revival, opposed both to fascism and forgetting. The students’ main mode was memory. Theirs was the realization that the modern Germany hegemony, to quote Schmidtke, “paralleled the traumatic Weimar experience,” and thus threatened to bring about equally traumatic consequences.¹⁵

Tracing the premise that the students borrowed their memory and their historical method from the Frankfurt School, the manner in which they advanced Adorno’s realization that “once culture itself has been debased to ‘cultural goods’...it has already defamed its *raison d’être*” must be observed.¹⁶ Rather than theorizing about cultural debasement, the students attempted to actively engage the forces responsible for its defamation. Herbert Marcuse, in writing on the student movements, noted that the first movement of the students was one of negation, a refusal “to participate, to play along, [out of] disgust with the lifestyle of the ‘affluent society.’”¹⁷ This negation then desired motion, incapable of being contained within the university. In 1966, following a series of sit-ins at the Free University of Berlin, the students passed a resolution in which

“The appointment of these men, readily indictable of antidemocratic activity, appeared as a flagrant dismissal of history in the eyes of the students.”



GERMAN YOUTH EXPRESSING THEIR DISSATISFACTION
(COURTESY OF WIKIMEDIA COMMONS)

they stated that their movement was “about viewing freedom in the university as a problem that points beyond the realm of the university itself.”¹⁸ This required a move into society at large, propagated by subversive political action, inspired by the Frankfurt School, and based on the belief that such actions “could result in ‘moments of self-consciousness’ for the protester” which would then spread across culture.¹⁹ Convinced that the situation in the university was, as Rudi Dutschke phrased it, “closely interlocked with the entire structure of society and government in a late-capitalist society,” the students sought to engage with power structures which ensured the status quo by denying the continued presence of fascistic tendencies — those hidden tendencies which sought to reify and sterilize culture and history.²⁰ These protestors, with their critical methodology in hand, “developed a strategy which aimed to create situations where power structures would be unveiled, and where participants would define themselves independently from authority.”²¹ This critical revelation of power is seen in the protests against the Shah’s visit to Germany in June of 1967. As a student-produced pamphlet described, the protestors were objecting to a leader who had “been shown to have tortured and murdered hundreds of politicians, journalists, students, and workers” — a despot who embodied every authoritarian tendencies.²² However, despite various accounts of police brutality and the murder of student activist Benno Ohnesorg, the protestors remained peaceful, establishing themselves as the antithetical, historically aware opposition. They used this antithesis, the stark contrast of violence and peace, to generate rhetorical power. The only crime that the students were guilty of, as their pamphlet said, was “speaking out for freedom, democracy, and social justice.”²³ The students were unquestionably successful in bringing power structures to light — forcing both contemporary German soci-

ety and twenty-first century historians to reckon with the fact that the SPD, in the words of Davis, “oversaw the suppression of nonviolent opposition...expression arguably more repressively than had [the CDU].”²⁴ The question arose as to whether the SPD was not more “right,” even more authoritarian, than it had originally appeared. More generally, the potential for formerly politically progressive parties to be ideologically debased as the result of political success was poignantly brought to light. The movement’s antiauthoritarianism, its main mode of leaving the strictures of the university, was also historical in nature, calling into question not only their current leaders, but also the regimes of Adenauer and the Third Reich and what they saw as their repressive tendencies — seeking to engage more with the public and bring it to awareness.²⁵

Rather than a movement of divisive violence, Rudi Dutschke, the SDS, and the students in general sought a universal “coalition of workers and students in the organizational form of [revolutionary] councils.”²⁶ Despite the violence generated by the authoritarian camp, the students strove to remain peaceful. In an interview with *Der Spiegel* regarding his critique of the Springer Press, Dutschke explicitly stated, “Violence, murder, and killing...would be wrong and virtually counterrevolutionary” — in this sense, they would also be ahistorical, reminiscent of the fascism the students sought to critique.²⁷ The object was to move into society at large, to expand their view’s power while establishing a broader base of support. Through this broad union, the movement would establish “scholarship that bases its analysis on present-day conflict situations throughout the world.”²⁸

It is now possible, with Dutschke’s idea of a self-aware, active scholarship, to see the manner in which a generational movement -- critically aware, highly educated, antagonistically seeking unity -- presented a unique means of coming to terms with Germany’s unique past. It is in this sense that Dutschke’s “Students and the Revolution,” dealt with earlier, can be understood. Dutschke argued that “German fascism has lost its definite historical form” — in other words, though the iconic party of fascism was recently dethroned, elements of its ideology persisted, colonizing various elements of political, social, and intellectual life.²⁹ The students’ goal was to bring this to the attention of the world at large. All the movement’s actions should be seen in precisely this light, as a vigorous viewing and criticism of all forms of fascism, both historical and present. Emerging from this movement was a new, antagonistic history, one that opposes the idea that “history is a result of the

personalities of world history,” the notion that “bourgeois thinking can only understand the conflict in society...as a result of outstanding individuals.”³⁰ In Dutschke’s argument, the students and their work produce a method “that emancipates and that does not need leaders as chief ideol-

ogues whose rigid, formulaic shorthand” forms a “new esoteric party lingo” - the students began to appear as yet another political body.³⁶ Yet more problematic, the once peaceful protest moved to one of active, militaristic violence. The Red Army Faction, a splinter group formerly

“The goal, then, was to actively keep the past of fascism in mind as a means of critiquing the present.”

ogist,” constituted by a mass of individuals characterized by “the fact that they take part in a steady critical dialogue,” aware that “any personal powers they have can be removed at any time.”³¹ This call to work was a call to responsibility, to awareness, and to resolution. Aware of history and the dangers of authority, the movement finally returned, though altered, to one of its foundational thinkers, Adorno, in his invective that criticism must “become aware of its own questionable position.”³²

To end on such a laudatory note, though, would be to miss the critical point. The turbulence that followed the end of the movement questioned the very basis on which it seemed founded. Following an attempt on Dutschke’s life, a wave of violent protests, breaking from the previously peaceful tones of the movement, arose — culminating on Easter Sunday, when a massive brawl broke out between students and police. As Schmidtke notes, these riots “marked a turning point for the student movement in Germany” — the observable fracture that portended a shattering.³³ In the following months, the movement continued to split, and by the SDS conference of 1968, the various conflicting ideals of the movement “became obvious... paralyz[ing] further activities.”³⁴ In the instant of its final iteration, as “the focus shifted away from...individual subjectivity to that of social class,” the movement lost the collectively individualistic force, the constant critique with history in mind, which inspired it in the first place.³⁵ Without the strong, individual voice of Dutschke, the movement lost much of its collective will. In a philosophical sense, this acts to bring to light the rather odd aporia of a movement seeming to seek collective consciousness predicated upon individual acts of critique. Pragmatically, the movement failed to achieve any of its aims in full: the emergency laws ultimately passed, the universities saw no sweeping reform, and there was no grand calling to consciousness. Horst Krüger, a critic of the students, may have been right in stating that the students “spoke a lan-

guage whose rigid, formulaic shorthand” forms a “new esoteric party lingo” - the students began to appear as yet another political body.³⁶ Yet more problematic, the once peaceful protest moved to one of active, militaristic violence. The Red Army Faction, a splinter group formerly affiliated with the SDS, viewed violence “as a simultaneous act of emancipation and defense” that would “force the state to reveal openly its fascism,” and terrorized Germany in the 1970s. This was clearly hypocritical in view of the movement’s original, peaceful, antifascist intent, yet it is also a violently clever reappropriation, revealing the frightening mutability of the student’s rhetoric.³⁷

That a movement aiming to function outside of governmental strictures ultimately adopted the language of a political party, and that a peaceful antifascist movement resolved in violence’s authority obviously questions its historical awareness. Perhaps, though, rather than making present analysis impossible, this reality can be used to better circumscribe a historically significant moment. While the movement, like so many others, petered out, it was for a time aware, as analysis has shown. As Von Dirke notes, “The Frankfurt Auschwitz Trial in 1965 ... introduced the majority of the German youth for the first time to the horrors of the Holocaust and heightened their sensibility for the question of historical failure and guilt.”³⁸ With a new generation came a hope for new thought and fresh eyes. Adorno, though not a member of the student’s generation, stated that “to write poetry after Auschwitz is barbaric.”³⁹ It is precisely this realization, of the utter barbarism and deep-seated unacknowledged hypocrisy that lay at the heart of contemporary Germany, which the students at their highest moment achieved. For this reason, the refusal of German society to allow the students, in their call to consciousness, to develop into a call to dogmatism and violence, perhaps showed the first signs of coming to terms with those atrocities which had just so recently, and so querulously, ended.

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A BIOLOGICAL “ARMS RACE”

APOBEC3F Diversity and its Influence on Lentiviral Resistance

ALLYSON TANK

RESTRICTION FACTORS ARE IMPLICATED IN LONG-TERM EVOLUTIONARY “ARMS RACES,” IN WHICH VIRAL ANTAGONISTS DRIVE THE EVOLUTION OF HOST PROTEINS, AND VICE VERSA. CONSEQUENTLY, RESTRICTION FACTORS ARE REMARKABLY VARIABLE, DISPLAYING POLYMORPHISM WITHIN SPECIES AND DIVERGENCE BETWEEN SPECIES AS A RESULT OF POSITIVE SELECTION. THIS PAPER INVESTIGATES DIVERSITY IN THE APOBEC3F (A3F) RESTRICTION FACTORS OF OLD WORLD PRIMATES IN ORDER TO DETERMINE WHETHER THEY DISPLAY EVIDENCE OF INVOLVEMENT IN AN EVOLUTIONARY “ARMS RACE.” WE SPECULATED THAT GENETIC VARIABILITY IN A3F COULD REFLECT EVOLUTIONARY CONFLICT WITH THE VIF PROTEINS OF PRIMATE LENTIVIRUSES, WHICH ARE KNOWN TO ENHANCE VIRAL REPLICATION BY BINDING AND DEGRADING HOST A3 PROTEINS. A3FS OF SEVERAL OLD WORLD PRIMATE SPECIES WERE GENOTYPED, AND THE SEQUENCES REVEALED BOTH INTRA-SPECIES DIVERSITY AND INTER-SPECIES DIVERGENCE. REPRESENTATIVE RHESUS MACAQUE (MACACA MULATTA) SEQUENCES WERE CLONED AND TESTED FOR SENSITIVITY TO VIFS FROM VARIOUS SIMIAN IMMUNODEFICIENCY VIRUSES (SIVS). EVOLUTION OF A3F IN THE RHESUS LINEAGE IS NOT DUE TO SELECTION BY SIVS, BUT MAY REFLECT ANTAGONISM BY ANOTHER RETROVIRUS.

INTRODUCTION

I. Restriction factors: barriers to cross species transmission

Acquired Immune Deficiency Syndrome (AIDS) was first identified as a disease in 1981, as increasing numbers of homosexual men were dying of opportunistic infections after becoming immunocompromised.¹ The causative agent was soon discovered to be a lentivirus, classified as Human Immunodeficiency Virus Type 1 (HIV-1).^{2,3} HIV-1 and its close relative HIV Type 2 (HIV-2) arose in human populations as a result of cross-species transmission events from natural simian hosts of the Simian Immunodeficiency Viruses (SIVs). The closest simian relative of HIV-1 is the strain naturally infecting chimpanzees (SIVcpz),⁴ while the closest simian relative of HIV-2 is the strain naturally infecting sooty mangabeys (SIVsm).⁵ Over 40 species-specific SIVs have since been identified in non-human primate species. A fraction of these infections result in immunodeficiency in the host species, while most are nonpathogenic in their natural hosts.⁶

The SIV of a given primate species cannot readily infect a different species without undergoing numerous adaptations. Part of this adaptation process involves evading host antiviral proteins known as restriction factors. Restriction factors are host proteins that utilize numerous mechanisms to interfere with viral infections as part of the innate immune response. Some interact directly with viral factors, while others make the cellular environment unsuitable for sustained viral replication.⁷ These defensive genes are subject to relatively rapid evolution under the selective pressure of viral counter-restriction mechanisms, and variants that confer greater fitness to the host during a viral outbreak will become fixed in a population much faster than would normally be expected as a result of genetic drift alone. The virus, in turn, can adapt to infect the host carrying these more fit alleles, creating a new selective pressure on the host. Thus, over evolutionary time, a comparatively large number of non-synonymous, or protein-altering, mutations will be evident in genes that have participated in these virus-host “arms races.”⁸

Genes can be examined for evidence of positive selection by comparing the rate of fixation of non-synonymous mutations (N) to the rate of fixation of synonymous mutations (S). dN/dS analysis demonstrates whether fixation of non-synonymous changes is occurring faster than expected under neutral selection alone. A dN/dS value greater than one indicates that a particular site is evolving under posi-

tive selection, while a dN/dS value less than one indicates that a site is evolving under purifying selection.⁹

This idea of a virus-host “arms race” is a fairly simplified model. RNA viruses can diversify their genome at a much higher rate than their hosts can. Hosts keep up through diversity of antiviral mechanisms rather than rapid counterrevolution. A viral variant that efficiently evades one host restriction mechanism will likely become more susceptible to another.¹⁰ However, over evolutionary time and as a result of many interactions with diverse viruses, host restriction factors bear signatures of positive selection.

Another defining factor of restriction factors is their relationships with viral antagonist proteins. In many cases, viruses have evolved specific proteins to evade the mechanism of a particular restriction factor. This virus-host relationship is highly species-specific because of the rapid adaptation process. As a general rule, any given virus will have accessory proteins that are most effective at neutralizing the restriction mechanisms of its natural host, but may not be effective against the homologous restriction mechanisms of other organisms.¹¹

A variety of restriction factors have been implicated in differential host resistance to primate lentiviruses, like HIV and the SIVs. Lentiviruses are part of the retrovirus family, and their life cycle is well understood. In order to infect a new target cell, the virion will first bind to a CD4 receptor and co-receptors on the cell surface. The virion membrane fuses with the cell membrane and the capsid is released into the cytoplasm. The viral RNA within the capsid then undergoes reverse transcription in the cytoplasm to form DNA that is transported into the nucleus and integrated into the host genome. The viral DNA is transcribed and translated using host machinery, and then viral RNA and proteins are localized to the cell membrane to form new virions. The restriction factors of primate lentiviruses have evolved to interfere with nearly every aspect of this life cycle, and thus act as barriers to cross-species transmission.

II. The APOBEC3 subfamily: a cluster of potent lentiviral restriction factors

The Apolipoprotein B mRNA-editing catalytic polypeptide-3 (APOBEC3) subfamily of cytidine deaminases represents one such group of restriction factors. Primates encode seven APOBEC3 (A3) genes that form a cluster on chromosome 22 in humans and chromosome 10 in rhesus macaque monkeys: A3A, A3B, A3C, A3D, A3F, A3G, and

A3H. A3 proteins are most highly expressed in HIV-1 target cell types such as T-cells, macrophages, and dendritic cells, and they are active in restricting retroviruses as well as some other viruses that do not replicate via reverse transcription.^{12,13} Human A3D, A3F, A3G, and A3H are known to be involved with HIV restriction, and each of these proteins has a functionally conserved homolog in rhesus macaques.¹⁴

The structure of A3 proteins is characterized by a cytidine deaminase domain consisting of six α -helices coordinated around five β -strands. This domain sits between a short N-terminal α -helical domain and a short C-terminal peptide.¹⁵ The deaminase domain contains a conserved zinc-binding catalytic HXEX₂₃-28PCX₂₋₄C motif that coordinates deaminase activity. A3A, A3C, and A3H contain a single deaminase domain, while A3B, A3D, A3F, and A3G contain two deaminase domains. In the four A3s with two deaminase domains, only the C-terminal domain (CTD) is catalytically active.^{16,17} A3G and A3F have the greatest sequence similarity of the seven A3s, and they share many structural features that have been elucidated from the crystal structures of their CTDs. The basic structure is maintained between the proteins, but differences paralleling the divergence in primary structure are evident.¹⁸

A3G is the most widely studied of the A3 subfamily, as it is believed to play the largest role in HIV-1 restriction.¹⁹ However, A3D, A3F, and A3H have also been implicated in viral restriction. A3s act by inducing cytidine-to-uracil mutations in the viral negative sense cDNA produced during reverse transcription, consistent with the proteins' known cytidine deaminase function.²⁰ Studies have shown A3G to be the more potent editor in humans, producing about 10 times more mutations in HIV-1 reverse transcripts than A3F in cell culture.²¹ Yet, A3F is stably co-expressed with A3G in human cells and is also packaged into HIV-1 virions to inhibit infectivity.²² A3G preferentially deaminates cytidines on the 3' end of 5'-CCC-3' or 5'-CC-3' sequences, while A3F and other A3 proteins preferentially deaminate the 3' cytidine in 5'-TC-3' sequences.²³

III. Interaction between APOBEC3 and Vif

Soon after the discovery of HIV-1, the viral protein termed viral infectivity factor (Vif) was found to be necessary for successful infection.²⁴ However, it was not necessary in every cell type; HIV-1 Δ vif could infect certain permissive cell lines, while infection was unsuccessful in others.²⁵ It was only later determined that A3 proteins were responsible for imparting resistance to Vif-deficient virus in these non-permissive cell types.²⁶ Vif has two domains, one crucial for binding A3 proteins and one that contains a highly conserved sequence required for mediating degradation.²⁷ Vif acts by targeting cytoplasmic A3 proteins for proteosomal degradation (Figure 1).²⁸ The interaction between A3s and Vif is a crucial determinant of the species specificity of a virus, and it is likely that a Vif from a given viral strain has evolved precisely to counteract the A3 proteins of its host species.^{29,30} The critical sites involved in A3-Vif interactions have largely been elucidated via mutagenesis studies, and as little as a single amino acid can be responsible for conferring the ability of A3 proteins to resist degradation by Vif. In A3G, the Vif binding site has been localized to the N-terminal deaminase domain (NTD). It was found that the Vif of an SIV strain isolated from African green monkeys (SIVagm) was inactive against human A3G (hA3G) but active against African green monkey A3G (agmA3G). This discrepancy was mapped to amino acid 128, an aspartic acid in hA3G and a lysine in agmA3G.³¹ This interface was expanded upon to include the proline at position 129 and the aspartic acid at position 130. Together, these three residues create a crucial negatively charged binding surface for HIV-1 Vif in hA3G.³² Contrary to A3G, the HIV-1 Vif binding site in A3F is localized at the CTD. The region comprising amino acids 289EFLARH294 in hA3F and agmA3F has been shown to be a critical region for HIV-1 Vif interaction.³³ Another study suggested that amino acid 324 is a critical residue that confers hA3F susceptibility to HIV-1 Vif and rhesus macaque A3F (rhA3F) resistance to HIV-1 Vif.³⁴ More recently, the negatively charged surface of α -helices 3 and 4 in hA3F has been strongly implicated in HIV-1 Vif binding.³⁵ In HIV-1 Vif,

“Thus, over evolutionary time, a comparatively large number of non-synonymous, or protein-altering, mutations will be evident in genes that have participated in these virus-host ‘arms races.’”

highly conserved N-terminal motifs are involved with A3G and A3F binding.^{36,37}

IV. Objective

While much attention has been given to the primary structures of A3s in terms of their effect on cross-species transmission of primate lentiviruses, examination of the diversity in these genes has been largely unconsidered. The most widely utilized primate model for investigating lentiviral infection and disease is the SIV infecting rhesus macaques (SIVmac), with rhesus macaques of Indian origin being the best characterized species.³⁸ Rhesus macaques are not natural hosts of SIV in the wild; rather, SIVmac emerged from cross-species transmission events in US primate centers and likely originated from infected sooty mangabeys.^{39,40} The adaptations allowing the virus to stably infect rhesus macaques likely occurred as a result of serial passages of the virus through multiple animals.⁴¹ Unlike SIVsm in its natural host, SIVmac is pathogenic in rhesus macaques, resulting in an AIDS-like disease. Given the well-established history of its emergence, SIVmac is an excellent model for studying the adaptive processes that viruses must undergo in order to successfully infect a new host species.

Recent work has demonstrated that the rhesus macaque A3G gene (rhA3G) is polymorphic at an N-terminal site, where three sequence variations are apparent. The variants displayed differential susceptibilities to SIVsm Vif-mediated degradation in cell culture, but all three could be degraded by SIVmac Vif.⁴² Thus, it is likely that SIVmac Vif had to adapt to counteract the SIVsm Vif-resistant rhesus macaque A3G allele in order for pathogenic SIVmac to emerge. It is also known that A3G has evolved under strong positive selection, and that Vif is not wholly responsible for this phenomenon.⁴³

The present study is intended to further characterize the degree of variation in other A3 family members, more specifically A3F. Old World primate A3Fs were examined for the genetic signatures of a rapidly adapting restriction factor. In a manner analogous to A3G, polymorphic sites in A3F may indicate potential determinants of the ability of SIVmac to infect its novel host. Polymorphic sites were investigated for their potential influence on the ability of rhA3F to resist degradation by Vifs derived from various SIV strains. Examination of allelic variance in A3F provides valuable insight into the barriers to cross-species transmission of lentiviruses, and offers further support to

the idea of an evolutionary “arms race” between restriction factors and their viral antagonists.

MATERIALS AND METHODS

Cell Lines

HEK293T cells were maintained in Dulbecco's modified Eagles medium (DMEM) containing 10% FBS, 1% L-glutamine, 1% Penicillin Streptomycin mixture, and 2.5% HEPES.

Reverse Transcriptase PCR (RT-PCR) and Cloning

RT-PCR reactions were performed on RNA samples (extracted previously at the New England Primate Research Center) using the Invitrogen (Carlsbad, CA) SuperScript[®] III One-Step RT-PCR System or the QIAGEN (Hilden, Germany) OneStep RT-PCR Kit according to their associated protocols. Gateway cloning forward and reverse primers were used (Table 1). Products were identified via gel electrophoresis and purified using QIAGEN QIAquick Gel Extraction Kit according to the protocols specified in the kit. Purified DNA samples were cloned using the Invitrogen Gateway[®] Cloning system and its associated protocols. Purified PCR samples were cloned into Invitrogen pENTR[®]/D-TOPO plasmids. The clones were transformed into Invitrogen One Shot[®] Stbl3[™] chemically competent E.coli and transformants were selected for via kanamycin selective plating. Plasmid DNA was isolated using the QIAGEN QIAprep Spin Miniprep Kit and its associated protocols, and then sent to Eton Bioscience (Charlestown, MA) for sequencing to confirm the identity of A3F sequence. Selected clones were then subcloned into Invitrogen pcDNA3.2[™]/V5-DEST plasmids (Figure 4). The clones were transformed into Invitrogen One Shot[®] Stbl3[™] competent E.coli and transformants were selected for via ampicillin selective plating. Plasmid DNA was isolated as before, and clones were sequenced again to confirm A3F insertion.

dN/dS Analysis

A3F sequences from rhesus macaques and other primates obtained from our own clones and from the NCBI database (see Appendix for sequences) were trimmed and aligned using the Multiple Align function in Geneious 6.1.8 software (created by Biomatters, available at <http://www.geneious.com>). The trimmed sequences were edited such that extraneous sequence before or after the A3F open reading frame was deleted. The sequences were up-

loaded to Datamonkey, a public server for comparative analysis of sequence alignments.^{44,45,46} All three available models for dN/dS analysis (SLAC, FEL, REL) were run for the relatively small data set of 15 sequences. As suggested by prior research, the SLAC and FEL models were run with P values of 0.25, while the REL model was run with the Datamonkey-suggested Bayes factor of 50.⁴⁷

Genotyping

PCR was performed on rhesus macaque genomic DNA samples obtained from multiple US primate research centers using Invitrogen Platinum® PCR SuperMix and its associated protocols. The primers used were genotyping forward and reverse (Table 1). The PCR products were visualized via gel electrophoresis, purified using the QIAGEN QIAquick Gel Extraction Kit according to its associated protocols, and sent to Eton Bioscience for sequencing. The sequence chromatograms were aligned using Geneious 6.1.8 software and examined for the presence of the SKEH/FQQY variants.

Mutagenesis

Around-the-horn PCR was used to mutate amino acids 60, 61, 63, and 64 from the FQQY variant to the SKEH variant (or vice versa) in select rhA3F clones. PCR was performed using Thermo Scientific (Waltham, MA) Phusion Flash High Fidelity PCR Master Mix and its associated protocols, and the patch mutant forward and reverse primers were used. PCR products were digested with 10U of DpnI (New England Biolabs; Ipswich, MA) and purified using the QIAGEN QIAquick PCR Purification Kit and its associated protocols. Ligation was performed using the Promega (Madison, WI) LigaFast™ Rapid Ligation System and its associated protocols. The clones were transformed into Invitrogen One Shot® Stbl3™ competent E.coli, and transformants were selected for via ampicillin selective plating. Plasmid DNA was isolated using the QIAGEN QIAprep Spin Miniprep Kit and its associated protocols, and then sent to Eton Bioscience for sequencing to confirm successful mutagenesis of A3F.

Immunoblotting

Plasmids to be used in cell culture were prepared using the Invitrogen PureLink® HiPure Plasmid Maxiprep Kit and its associated protocols. HEK293T cells were seeded in 6-well plates at a density of 800,000-1,000,000 cells/well or 12-well plates at a density of 200,000-400,000 cells/well 24-48 hours prior to transfection. Cells were

transfected with 1-3ug total DNA using GenJet reagent (SignaGen Laboratories; Gaithersburg, MD) and its associated protocols. Cells were harvested 48 hours post-transfection using 100-200uL IP Lysis Buffer. Samples were added to 2x Laemmli Buffer and boiled for 10 minutes. Proteins were separated using SDS/PAGE and then transferred to PVDF or nitrocellulose membranes via Bio-Rad (Hercules, CA) Mini Trans-Blot Electrophoretic Transfer Cell and its associated protocols. Membranes were blocked overnight in 1.25% milk, washed in 1x PBS-0.1% Tween-20 solution, and incubated for 1 hour in anti-V5-HRP (Novex; Carlsbad, CA) to probe for A3 protein or anti-β-actin-HRP antibody (Abcam; Cambridge, MA) to probe for β-actin. Alternatively, a primary mouse monoclonal anti-β-actin antibody (Sigma-Aldrich; St. Louis, MO) and secondary anti-mouse-HRP antibody (Thermo Scientific) were used to probe for β-actin. All antibodies were diluted in 1.25% milk according to manufacturer's specifications. After washing again, blots were developed using either Amersham ECL Prime Western Blotting Detection Reagent (GE Healthcare Life Sciences; Little Chalfont, Buckinghamshire, United Kingdom), or Thermo Scientific SuperSignal™ West Femto Maximum Sensitivity Substrate and then visualized using Bio-Rad ChemiDoc MP gel imaging system.

RESULTS

I. Investigating diversity and positive selection in Old World primate A3F

In order to determine whether primate A3F displays the hallmarks of a restriction factor that has been antagonized over time, rhesus macaque (*Macaca mulatta*) A3F sequences were first investigated for evidence of polymorphism. To examine polymorphism within species, RT-PCR was performed on RNA samples obtained from 10 different rhesus macaques. The resulting DNA was cloned and the sequences were examined for both silent and non-synonymous polymorphisms. The data showed that A3F is a highly polymorphic gene in rhesus macaques, and that many of the single nucleotide polymorphisms result in amino acid changes (Figure 2).

To examine inter-species diversity, RT-PCR was also performed on multiple RNA samples from sooty mangabeys (*Cercocebus atys*), crab-eating macaques (*Macaca fascicularis*), and pigtail macaques (*Macaca nemestrina*). A3F coding sequences from these related primates showed divergence from each other and from rhesus macaques,

demonstrating that there are fixed differences between A3F genes in Old World primates (Figure 3).

After establishing that A3F is a polymorphic gene in rhesus macaques and that fixed differences exist between A3Fs of related Old World primates, a dN/dS analysis was performed in order to determine whether any codons have evolved under positive selection. The species that were included in this analysis were rhesus macaques, crab-eating macaques, pigtail macaques, sooty mangabeys, African green monkeys (*Chlorocebus sabaeus*), humans (*Homo sapiens*), chimpanzees (*Pan troglodytes*), bonobos (*Pan paniscus*), and drills (*Mandrillus leucophaeus*). These sequences were uploaded to Datamonkey, a public server for comparative analysis of sequence alignments (See dN/dS section in Materials and Methods). 11 codons were found to be evolving under positive selection. The sites were mapped relative to the deaminase domains and catalytic motifs in A3F (Figure 4), and seven sites were found to overlap with those previously identified to be polymorphic in rhesus macaques.

II. A closer look at a polymorphic and positively selected site in rhesus macaques

Four codons at positions 60, 61, 63, and 64 in rhesus macaques showed evidence of both intra-species variability and positive selection. In the rhA3F clones, these sites were linked and appeared as either 60FQPQY64 (henceforth referred to as FQQY) or 60SKPEH64 (henceforth referred to as SKEH). 20 of 35 clones showed the FQQY sequence, while 15 clones showed the SKEH sequence. The patch change from FQQY to SKEH is fairly significant at the amino acid level: bulky hydrophobic phenylalanine is exchanged for a small polar serine, polar uncharged glutamine is exchanged for a positively charged lysine and then a negatively charged glutamic acid, and hydrophobic tyrosine is exchanged for a positively charged histidine. Thus, the SKEH variant has three charged amino acids, whereas the FQQY variant is a neutral surface.

A broader genomic survey was done in order to better understand the level of diversity in the patch. Targeted PCR was used to amplify an approximately 680 base pair (bp) stretch of A3F from genomic DNA samples representing 44 different rhesus macaques. 15 animals appeared to be heterozygous FQQY/SKEH, 17 animals appeared to be homozygous FQQY/FQQY, and 12 animals appeared to be homozygous SKEH/SKEH. This frequency distribution

correlated to the results from the cloned sequences. Thus, it is reasonable to conclude that this patch has maintained a high level of diversity within rhesus macaques, and that this diversity is not unique to a particular population of animals or the result of a small data set.

III. The functional significance of diversity

After demonstrating that there is a high level of diversity in primate A3F and that some sites in the gene have evolved under positive selection, experiments were done to determine whether the different A3F alleles displayed differential susceptibilities to Vifs of various SIV strains. First, A3F clones from rhesus macaques, crab-eating macaques, sooty mangabeys, and pigtail macaques were tested for expression in HEK293T cells. Of the 17 clones tested, 11 were found to express, as visualized via Western blot (Figure 5). They expressed at variable levels, and only a subset of clones that represented diverse sequences and were well-expressed were chosen for further examination.

In addition to these clones representing naturally occurring rhA3Fs, three point mutants were made by exchanging the FQQY and SKEH patches by site-directed mutagenesis. The resulting clones contained identical sequence to their parent rhA3F clone except for the four nucleotides that are responsible for the amino acid changes at this patch. These point mutants were also tested for expression in HEK293T cells, and two of the three clones tested were found to be highly expressed as detected via Western blot (Figure 5).

In order to determine whether the rhA3F variation confers differential resistance to Vif-mediated degradation, HEK293T cells were simultaneously transfected with A3F expression constructs and Vif expression constructs containing the Vif coding sequences of different SIV strains. The expression of A3F in the presence of these Vif challenges was then detected via Western blot and compared between the different clones as an indication of susceptibility to Vif-mediated degradation. Two rhA3G expression constructs were also included as controls because their phenotypes against these Vifs have been published previously.⁴⁸ A representative blot is shown in Figure 6, and it reveals three interesting observations. First, multiple rhA3Fs displayed resistance to the Vif derived from rhesus macaque-adapted SIVmac239. Second, nearly all of the rhA3Fs were degraded by a SIVsm Vif and by Vif from the stump-tailed macaque SIV strain (SIVstm). These are

somewhat surprising results, considering that the A3F-Vif interaction tends to be species-specific. Viral antagonist proteins are generally well-adapted to the restriction factors of their hosts, so one would expect Vif from rhesus macaque-adapted SIVmac to degrade the rhA3Fs and Vifs from related SIVs to not be as effective. However, this was not the case; SIVmac Vif did not degrade rhA3Fs, while Vifs from related SIVsm and SIVstm did. Finally, the

this issue, and 11 sites in primate A3F were shown to be under the influence of positive selection. This is potentially only a subset of sites that are subject to positive selection, as the different analysis models identified as many as 25 positively selected sites.

An interesting patch of four linked amino acids was identified at codons 60, 61, 63, and 64, where two sequences

“The interaction between A3s and Vif is a crucial determinant of the species specificity of a virus, and it is likely that a Vif from a given viral strain has evolved precisely to counteract the A3 proteins of its host species.”

FQQY/SKEH patch genotype did not affect sensitivity to any of the Vifs tested.

DISCUSSION

Investigations into the diversity of primate A3F revealed that the gene displays the hallmarks of a restriction factor that has been subject to positive selective pressure by viral antagonists over evolutionary time. A3F is a highly polymorphic gene within rhesus macaques, and many single-nucleotide polymorphisms lead to significant amino acid changes. Charged residues are often implicated in protein-protein interactions, and therefore in the context of a restriction factor. Polymorphisms that change the charge of the amino acid may be more likely to be involved in an evolutionary “arms race” than more functionally conservative polymorphisms.

Examination of the inter-species variation via dN/dS analysis indicated that multiple sites within the gene have been subject to positive selection, and some of these sites overlap with the polymorphic sites found in rhesus macaques. It is important to note that the input for dN/dS analysis had 15 sequences representing 10 different primate species. This does not represent the full range of primate A3Fs, and the use of multiple A3F variants of certain species may have artificially influenced the results. However, eliminating variable alleles of a given species also would also have had the potential of producing artificially conservative results. Comparing results of multiple analyses that differ in their level of conservativeness helped to address

were found at similar frequencies in rhA3F clones. dN/dS analysis suggested that these codons have been subject to positive selective pressure. The FQQY allele appeared at a slightly higher frequency than the SKEH allele in a broader genomic analysis of the region in rhesus macaques; however, the less common SKEH haplotype did appear across multiple animals and clones, unlike many other polymorphic sites where the less common allele appeared at a significantly lower frequency and sometimes only in one animal. The changes at the amino acid level in this patch are rather significant, as three charged amino acids are introduced in the SKEH haplotype while the patch is neutral in the FQQY haplotype. This patch was also notable because of its location in the structure of A3F. It borders the N-terminal catalytic motif, and is adjacent to a known determinant of strain-specific resistance to SIV-Vif mediated degradation in A3G. Polymorphism at residue 59 in rhA3G confers variable susceptibility to degradation by SIVmac Vif.⁴⁹ Together, these observations suggest that this patch may play a key role in an interaction with a viral protein, particularly with SIV Vif. However, functional tests did not suggest that variation at this site plays a role in determining susceptibility to Vif, as rhA3F clones that contained variable patch alleles did not display differential resistance to Vifs from various SIV strains.

Despite this patch's proximity to residue 59, it is not necessarily surprising that it does not play a role in rhesus A3F interaction with Vif. It is known that HIV-1 Vif interacts with the CTD in A3F, unlike in A3G where it interacts with the NTD. While this interaction has not been precisely

mapped with SIV Vifs, it is reasonable to believe that they will behave analogously to HIV-1 Vif and interact at the CTD in A3F. Therefore, this NTD patch would not be expected to play a direct role in interactions with Vif.

Functional tests did reveal multiple surprising phenotypes relating to the SIV Vifs. The rhA3F clones tested displayed resistance to degradation by SIVmac Vif. SIVmac239 is a cloned viral isolate that is well adapted to its rhesus macaque host. Thus, one would expect the Vif derived from this macaque-adapted virus to degrade the rhA3F clones, yet this was not observed. rhA3F function was further tested against a more diverse panel of macaque-adapted Vifs (data not shown), and similarly to the SIVmac239 isolate, the rhA3F alleles were resistant to degradation. Thus, this phenotype does not appear to be a specific phenomenon of the SIVmac239 isolate, but rather a more general property of rhA3F. It is important to note that the rhA3G controls confirm that this SIVmac239 Vif clone is active and behaves as expected with these rhA3G alleles. It is possible to speculate that SIVmac239 evolved to effectively counteract rhA3G, the more potent deaminase, but in doing so it traded off the ability to neutralize rhA3F. This proposal is supported by the fact that the more ancestral SIVsmEo41 Vif completely degraded the rhA3F clones tested, with the exception of rhA3F-WI, which showed an intermediate phenotype.

A3F is known to restrict viruses other than lentiviruses, so it is reasonable to believe that a different retrovirus may be responsible for driving this high level of diversity in rhesus macaque A3F. A potential candidate is simian foamy virus (SFV), a member of the Spumavirus genus of retroviruses. FVs are distinct from other retroviruses in many aspects, including their gene expression, protein processing, and replication. They are found in non-human primates, cats, cows, and horses, as well as humans who have been infected by non-human primates. They cause a persistent infection, but there are no known pathologies in natural or human hosts.⁵⁰⁻⁵¹ It has been suggested that SFVs have co-evolved with their Old World primate hosts for over 30 million years, marking them as the oldest known RNA viruses in vertebrates.⁵² A3 proteins have been implicated in restriction of FVs, and the FV accessory protein Bet has been found to counteract A3 restriction mechanisms analogously to HIV-1 Vif.⁵³⁻⁵⁴ The relatively old age of FVs as compared to SIVs, their ubiquitous presence in Old World primates, and the existence of an accessory protein that may have anti-A3 properties together suggest that SFVs may have acted as a selective pressure on A3F.

This investigation offered valuable insight into the genetic diversity of A3F in Old World primates. The presence of unusually high intra- and inter-species variability indicates that A3F has been continuously exposed to positive selective pressure. While SIV may not necessarily be the virus responsible for driving the polymorphism in rhesus macaque A3F, understanding the restriction factor's genetic variability opens a line of inquiry into other potential selective pressures. It is also important to note that only one linked polymorphic patch was investigated; there are several other sites that may play a role in interactions with Vif. Further mutagenesis studies will reveal whether any of these sites play a role in SIV restriction, or whether it truly is another virus altogether that has provided the selective pressure on rhA3F. In addition, the sooty mangabey, crab-eating macaque, and pigtail macaque A3F clones have not been fully characterized in terms of their susceptibility to various Vifs. This information will provide a more complete picture of the role that Vif has played in driving A3F evolution, and further elucidate mechanisms of cross-species transmission of primate lentiviruses.

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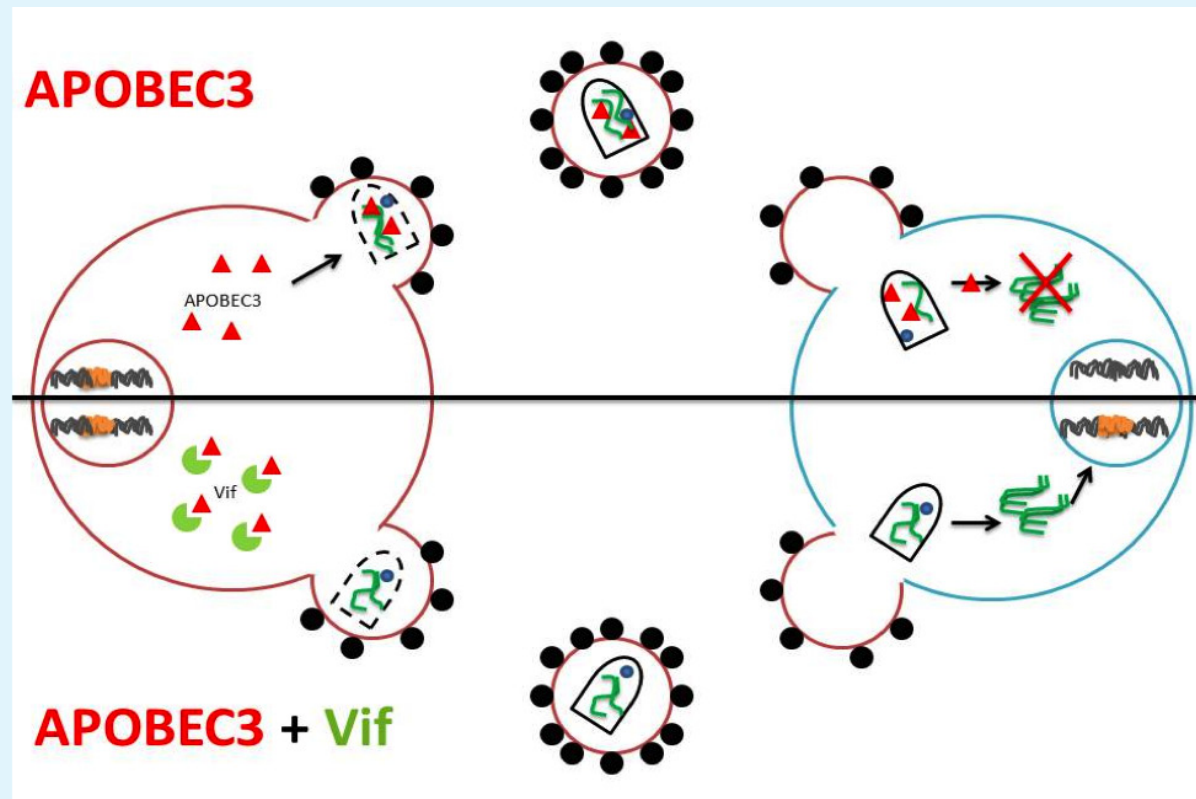


FIGURE 1: A3 PROTEINS INTERFERE WITH LENTIVIRAL REPLICATION IN THE ABSENCE OF VIF. THE TOP HALF OF THE FIGURE EXEMPLIFIES A CELL INFECTED WITH A VIRUS THAT DOES NOT ENCODE VIF. HOST A3 PROTEINS (TRIANGLES) INCORPORATE INTO A BUDDING VIRION, AND THEN INTERFERE WITH THE PROCESS OF REVERSE TRANSCRIPTION IN THE TARGET CELL TO PREVENT FURTHER VIRAL REPLICATION. THE BOTTOM HALF OF THE FIGURE EXEMPLIFIES A CELL INFECTED WITH A VIRUS THAT ENCODES VIF. VIF (¾ CIRCLES) PREVENTS A3 PROTEINS FROM INCORPORATING INTO THE BUDDING VIRION BY TARGETING THEM FOR PROTEOSOMAL DEGRADATION, ALLOWING REPLICATION TO CONTINUE UNHINDERED IN THE TARGET CELL.

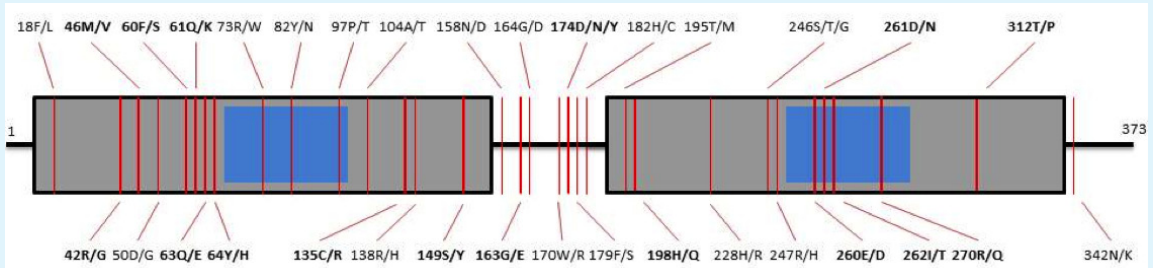


FIGURE 2: DISTRIBUTION OF POLYMORPHIC SITES IN RHESUS MACAQUE A3F. THE DARK GRAY BOXES REPRESENT THE CYTIDINE DEAMINASE DOMAINS IN A3F, AND THE BLUE SHADING INDICATES THE CATALYTIC MOTIF. THE LINES SHOW THE APPROXIMATE LOCATION OF SITES FOUND TO CONTAIN NON-SYNONYMOUS POLYMORPHISMS IN TWO OR MORE RHESUS MACAQUE CLONES. THE CODON NUMBERS AND CODED AMINO ACIDS ARE INDICATED ABOVE OR BELOW THE IMAGE. ONLY POLYMORPHISMS THAT WERE SEEN IN AT LEAST TWO CLONES ARE INCLUDED. BOLDED LINES AND CODON NUMBERS INDICATE THAT THE POLYMORPHISM WAS FOUND IN MULTIPLE ANIMALS.

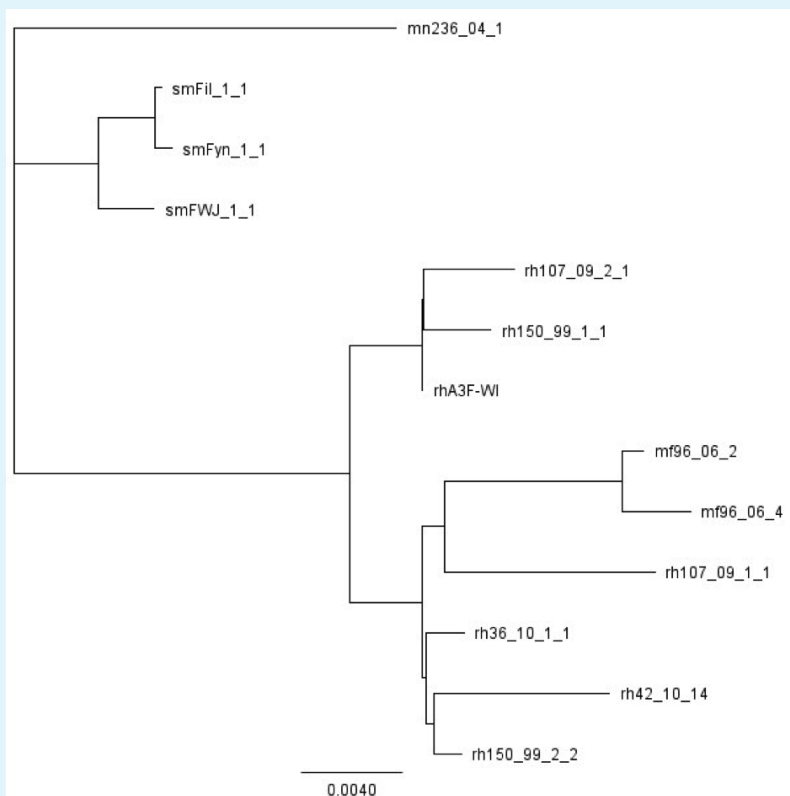


FIGURE 3: INTER-SPECIES DIVERSITY OF A3F IN OLD WORLD PRIMATES. THE PHYLOGENETIC TREE SHOWS THE DEGREE OF DIVERGENCE BETWEEN RHESUS MACAQUE A3F CLONES (RH), SOOTY MANGABEY A3F CLONES (SM), CRAB-EATING MACAQUE A3F CLONES (MF), AND PIGTAIL MACAQUE A3F CLONES (MN). THE SPECIES TEND TO GROUP TOGETHER INTO DISTINCT LINEAGES, AND DIVERSITY WITHIN SPECIES IS EVIDENT WITHIN THESE LINEAGES.

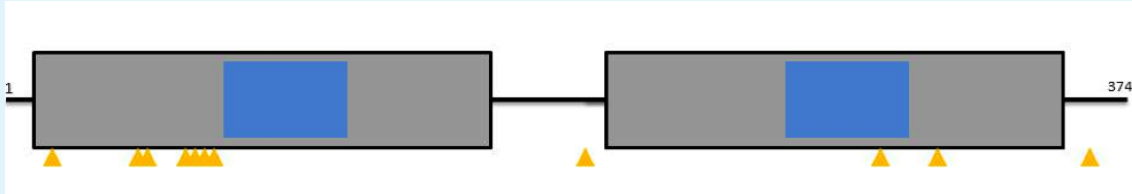


FIGURE 4: DISTRIBUTION OF POSITIVELY SELECTED SITES IN PRIMATE A3F. THE GREY BOXES REPRESENT THE CYTIDINE DEAMINASE DOMAINS IN A3F, AND THE SHADED AREAS INDICATES THE CATALYTIC MOTIFS. THE TRIANGLES SHOW THE APPROXIMATE LOCATIONS OF POSITIVELY SELECTED CODONS IDENTIFIED VIA DN/DS ANALYSIS. THESE SITES ARE DISTRIBUTED FAIRLY EVENLY THROUGHOUT THE A3F GENE.

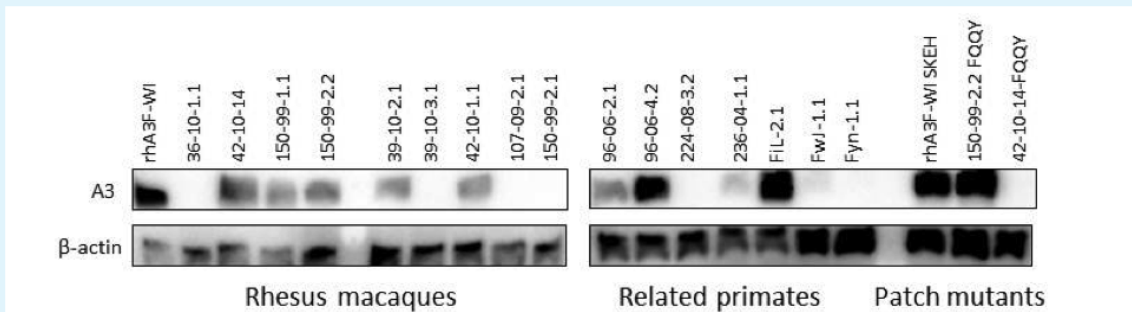


FIGURE 5: A3F ALLELES SHOW VARIABLE LEVELS OF EXPRESSION IN CELL CULTURE. A3F EXPRESSION CONSTRUCTS WITH CODING SEQUENCE ORIGINATING FROM RHESUS MACAQUES (LANES 1-10), CRAB-EATING MACAQUES (LANES 11-12), PIGTAIL MACAQUES (LANES 13-14), OR SOOTY MANGABEYS (LANES 15-17), ALONG WITH THE RHESUS MACAQUE PATCH MUTANTS (LANES 18-20) WERE TRANSFECTED IN HEK293T CELLS. CELLS WERE HARVESTED AFTER 48 HOURS, AND PROTEINS WERE SEPARATED VIA SDS/PAGE AND VISUALIZED VIA WESTERN BLOT (SEE IMMUNOBLOTTING SECTION IN MATERIALS AND METHODS).

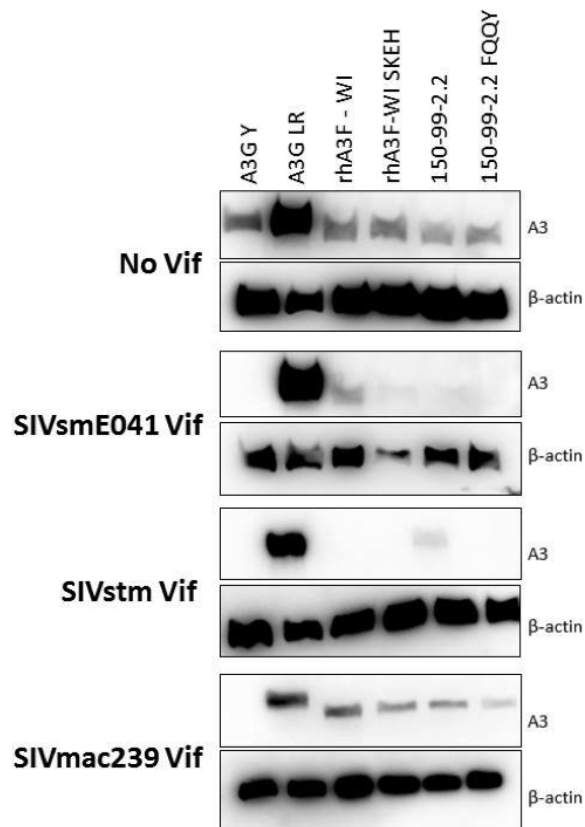


FIGURE 6: WESTERN BLOT SHOWING RHA3F SUSCEPTIBILITY TO SIV VIF-MEDIATED DEGRADATION. A3 AND VIF EXPRESSION CONSTRUCTS WERE CO-TRANSFECTED INTO HEK293T CELLS. CELLS WERE HARVESTED 48 HOURS POST-TRANSFECTION AND PROTEINS WERE SEPARATED VIA SDS/PAGE AND VISUALIZED VIA WESTERN BLOT (SEE IMMUNOBLOTTING SECTION IN MATERIALS AND METHODS). THE A3GS WERE INCLUDED AS CONTROLS FOR VIF EFFECTIVENESS, AS THEIR SUSCEPTIBILITIES TO THESE VIFS HAVE BEEN PREVIOUSLY INVESTIGATED (KRUPP ET AL. 2013). THE RHA3FS ARE SUSCEPTIBLE TO SIVSMEO41 VIF AND SIVSTM VIF, BUT ARE RESISTANT TO SIVMAC239 VIF. THE FQQY/SKEH PATCH DOES NOT AFFECT SUSCEPTIBILITY TO THE VIFS TESTED.

CARTOGRAPHERS IN THE CARIBBEAN

Economics and Mapping in the Colonial New World

BENJAMIN SHAPIRO

THIS PAPER IS THE CULMINATION OF A SEMESTER'S WORTH OF RESEARCH AND WORK CONDUCTED AT THE BURNS LIBRARY AT BOSTON COLLEGE AS PART OF DR. SYLVIA SELLERS-GARCIA'S "MAKING HISTORY PUBLIC" COURSE IN THE SPRING OF 2014. THIS CLASS FOCUSED ON CARTOGRAPHY FROM THE EARLY MODERN ERA, AND THIS ARTICLE FOCUSES ON AN INCREDIBLE ATLAS THAT WAS PUBLISHED IN 1775 ENTITLED *THE WEST INDIA ATLAS*. THE ATLAS, WHICH IS A DETAILED EXAMPLE OF COLONIAL-ERA CARTOGRAPHY, WAS PUBLISHED BY AN ASSISTANT TO A MR. THOMAS JEFFERYS, WHO WAS THE GEOGRAPHER TO KING GEORGE III AT THE TIME OF HIS DEATH IN 1771. THIS REMARKABLE TEXT FEATURES NOT ONLY ACCURATE MAPS AND REPRESENTATIONS OF THE CARIBBEAN ISLANDS, BUT ALSO VIVID DESCRIPTIONS OF THE VARIOUS TERRITORIES AND THEIR HISTORIES. BOTH THE ECONOMIC CONTEXTS AT THE TIME THE ATLAS WAS PUBLISHED AND HOW JEFFERYS AND HIS ASSISTANTS CHOSE TO REPRESENT THESE CONTEXTS WITHIN THE VARIOUS MAPS THROUGH SYMBOLS AND REFERENCES TO NAVIGATIONAL RESOURCES WERE EXAMINED AND ANALYZED.

INTRODUCTION

As a region of tropical islands and countless waterways, the Caribbean represented far more than just a picturesque landscape for exploration to those who lived there during the eighteenth century. From the pirate haven of Nassau to the sweltering plantations of Barbados, people from across Europe and other parts of the world came together in this region for opportunities in the realms of trade and wealth. This vast amount of wealth manifested itself in items and concepts such as precious metals, personal glory, and mass quantities of commodities like sugar and rum, which attracted those from the highest and lowest echelons of society to locations as diverse as their backgrounds. The islands themselves even reflected these differences to an extreme degree; on islands like Jamaica and Cuba, lush tropical forests dominated the landscape and contrasted sharply with the islands of the sandy and flat Bahama archipelago.^{1,2}

Exoticism, to most Europeans, remained a very broad term at this time, but the consensus on its definition seems to include foreign flora, fauna, climate, societies, and language. With islands occupied by the Spanish, French, Dutch, and British, the Caribbean embodied this exoticism during the colonial times. Tropical jungles containing wild

“Situated thousands of miles away from Europe, the Caribbean represented an extremely distant and exotic place to many Europeans, both figuratively and literally.”

species of mammals and birds fascinated many of these Europeans, who became evermore curious about the islands. They came to view these exotic islands, and the surrounding regions of Mexico and Florida, through pieces of artwork and the tales of individuals who lived and traded there. Combined with the growing merchant networks of individuals in the region, these methods of portraying exoticism seemed to draw most of the migrants to the region.

Depending on their background, many of these migrants sought their fortunes in trade, pirating or privateering, or plantation agriculture. This influx of labor and use of merchant networks and agricultural lands for economic gain constituted the most important foundational pieces for the Industrial Revolution in the early nineteenth century.³ The

romanticized nature of the Caribbean during this time also provided some measure of inducement for migrants to make the journey across the Atlantic, though this effect is difficult to gauge. Romanticizing the region impacted various social groups in different ways during the colonial era. Tales of the high seas and abundant wealth available for the taking likely inspired the ruffians of society, pirates and privateers, far more than rational and economically sound merchants. Collectively, one can refer to the system that characterized the increase in trade and growth on an economic basis as mercantilism, and the method in which this system operated as the triangular trade.

As a system of trading networks across the vast Atlantic Ocean, the triangular trade required extremely precise charts and maps for sailors and merchants who carried and directed shipments of cargo to specific ports. In the mid-eighteenth century, an English cartographer and geographer to the King of England named Thomas Jefferys began compiling a series of charts and maps that formed the basis of his atlas entitled, *The West Indian Atlas or a General Description of The West Indies: Taken from Actual Surveys and Observations*.⁴ Unfortunately, Jefferys passed away in 1771 before the completion of his work, which subsequently fell to one of his editors to complete and

publish.⁵ Because of his role as the King’s geographer, Jefferys, and subsequently the maps he created, carried strong credibility and respect. In this particular atlas of the West Indies, Jefferys clearly focused on the aspects he deemed necessary for travelers and inhabitants of the region to know.

By charting out the vast territories and wide stretches of open waters within a merchant and economic context, Jefferys presented the atlas under the heavy influence of the mercantilist attitude prevalent throughout Europe, which ultimately resulted in the map’s limited objectivity. The images and drawings associated with the maps, along with the context of mercantilism that existed during this time, indicate that Jefferys created the atlas for the specific purpose of providing topographic and economic information

about some of the significant islands to expose the trade potentiality of the Caribbean. However, he makes no specific references to mercantilism itself in the atlas, and is therefore not likely to make an argument for or against it. European governments, in contrast, heavily promoted these mercantilist doctrines of encouraging government control over trade for the accumulation of wealth, often depleting the finite amount of available resources on the planet.⁶ These doctrines also ignored the well-being of the lands where the resources came from, as conveyed by Jefferys's editor: "Europe is continually enriched by carrying constantly to America not only all the goods which it produces or manufactures, but likewise those that its ships fetch from Asia or Africa."⁷ From this quote and indicators within the maps, it becomes clear that this ideology heavily influenced the atlas Jefferys created, which truly limited the objectivity of the maps. One can infer that Europeans viewed, and utilized partially through accurate mapping, the Caribbean and its islands as a vital economic hub of trade and resources.

MAPPING AND IMAGERY

Situated thousands of miles away from Europe, the Caribbean represented an extremely distant and exotic place to many Europeans, both figuratively and literally. Artists and cartographers like Jefferys sought ways to convey the characteristics of this strange region, including the island jungles' stifling humid climate and their newly



FIGURE 1: A MAP OF THE NORTHERN COAST OF CUBA, EMPHASIZING THE WIND CURRENTS AND REGIONAL GEOGRAPHY TO AID IN NAVIGATION OF MERCHANT FLEETS.¹¹

discovered creatures. By describing a land full of bountiful resources and wealth prime for the taking, many eighteenth-century literary and cartographic pieces attracted European merchants and lower-class citizens to the islands. In Jefferys's atlas alone, there exist significant depictions of this economic thinking through an ornate drawing on the title page, as well as smaller references within the introductory text. The title page drawing, which depicts a type of island scenery with a European man and several Africans on the beach, gives some indication about the kind of presence Europeans imposed on the region. In the picture, one of the Africans pictured is smoking a pipe of tobacco and is sitting amongst a group of barrels that, by the presence of a bottle on top of one of them, seems to indicate barrels of rum.⁸ Rum, developed from sugar, became a massive export to both mainland North America and Europe, while tobacco became a heavily addictive substance in both of these regions as well.

The basic formatting system Jefferys employs for the atlas bears some resemblance to the practices illustrated in modern cartography; however, he also uses some proto-anthropologic analysis throughout the atlas. The map of Texas, for example, is meticulously accurate in and of itself, but Jefferys also places a description of the local inhabitants by writing the information in a wide arc on the map itself. His emphasis on the exotic nature of the Caribbean region and the New World in general, which contrasts heavily with many European ideals and social norms, is evident in his account of some of these natives as "tribes of wandering Indians."⁹ Jefferys also follows a trend of many European cartographers by indicating the impact of Christianity on the region through the labeling of towns and villages in Mexico. On these labels, the only indicator besides the name is a symbol of a church steeple, which dominated many eighteenth-century cityscapes in Europe and in the European colonies of the New World.¹⁰

As a series of islands surrounded by water, trade through overseas shipping became critical for the survival of colonial populations in the Caribbean. Jefferys takes very careful note of this through his maps and points out several locations that might interest ship captains, such as "good anchoring and watering for ships" on a Bahamian island as well as the presence of "fresh water" in Florida (Figure 1).¹¹ Trying to facilitate the passage of ships in the region indicated, at the very least, an understanding by Jefferys of the vast merchant networks under development in the region.



FIGURE 2: A MAP OF CENTRAL JAMAICA WITH VERY DISTINCTIVE INDICATIONS OF SETTLEMENTS, PLANTATIONS, AND ROADS ON THE ISLAND SURROUNDING KINGSTON AND THE PORT ROYAL AREA.¹³

On a far narrower scale, Jefferys also mentions a very specific trade route: that of the Spanish treasure fleet, the Flota, on its return journey from the Americas to Spain. Considering that this is an English atlas, it seems rather provocative and suggestive for Jefferys to deliver such crucial information regarding another country's property.¹² This inclusion ties in directly with the inherently competitive nature of mercantilism found in Jefferys's atlas. He also takes care to decorate most of the larger maps with other drawings of European vessels on the water, which further emphasizes the naval and commercial lifestyle of the region (Figure 2).¹³ Within the mappings of territories outside English control, Jefferys includes detailed locations of towns, roads, and physical features of these different regions. Most of these details are likely due to the acquisition of charts from Spanish ships in the 1760s during the most recent war with Spain, which is assumed to be the Seven Years' War.¹⁴ For example, the mapping of the southern coast of Hispaniola is notable for its French labeling, along with the English equivalents in some locations. The markings of the land's physical features were also useful for sailors in that region (Figure 3).¹⁵ The Anglo-Spanish rivalry, as seen in the map of the southern part of Cuba, can also be seen through English intrusions and surveying of Spanish possessions for their own benefit.¹⁶

Jefferys, or possibly his editor, did not just limit his illustrations to his maps; he also included in the atlas an elaborate illustration following the introductory descriptions of

the different islands and regions. The image is very clearly that of an angel standing, in a classical pose, on the beach of an island, which seems to exist somewhere in the Caribbean considering the surrounding flora. The most poignant connections to the ideals of European superiority and exploitation lie within the objects that surround the angel in the picture. Signs of civilization, ranging from a telescope to a sheet music book, lie at the angel's feet amid further clutter, while a European vessel is present in the background. The symbolic nature of all these different images refers to the notion many Europeans held of the transfer of culture and civilization from Europe to the Caribbean islands.¹⁷ Not all development of the Caribbean region stemmed from European intrusions, as many agricultural practices in the region and its immediate surrounding areas originated from Native American practices. For example, the physician Sir Hans Sloane provided a depiction of the exotic practice of how natives grew cactus plants in southern Mexico for the production of red dye, which they accomplished by taking acid from the body of the beetle that feeds on the cactus.¹⁸

GEOGRAPHY

In a tropical climate like the Caribbean, Europeans discovered a wide variety of physical features and wildlife foreign to these settlers amongst their small settlements and plantations. Ranging from the tropical jungles of Cuba to the flat swamplands of South Florida, this geography often posed problems for settlement and economic development, but the European settlers on each island utilized these physical features to their advantage. One could usually classify these advantages in terms of natural fortifica-



FIGURE 3: AN ILLUSTRATION FOUND IN THE OPENING PAGES OF THE ATLAS THAT ILLUSTRATES THE EXOTIC CHARACTERISTICS OF THE CARIBBEAN THAT EUROPEANS EMPHASIZED.¹⁵

tions or suitable climates for agriculture. For example, the “great mountains” of Jamaica provided great natural fortifications against intrusion of foreigners or pirates hostile to the British settlers in Kingston and Port Royal.¹⁹ Jefferys’s atlas depicts these massive mountains through detailed and accurate illustrations of multi-layered mountainous formations (Figure 4).²⁰ He also offers a sea-level depiction of the island of Barbados by sketching the mountains from the perspective of a sailor approaching the island from the northwest.²¹

Topographical differences between the islands ultimately influenced the respective successes of different colonists within the region. In the Bahamian archipelago, for example, the settlers in the early eighteenth century primarily consisted of pirates and privateers who settled the island of Providence and established a colony at Nassau. Because of a lack of drinking water and suitable soil for cultivation, the colony and its descendants generally relied on the spoils of their plunder.²² In contrast, the agricultural islands of the Lesser Antilles produced huge amounts of crops for export, such as the French-owned island of Guadeloupe that annually yielded “46 million weight of sugar.”²³ Numbers from other sugar-producing islands such as Barbados remained similar, trading “above 432,000l. sterling,” to different points throughout the triangular trade regions.²⁴ Relative stability in English governance and victories over the French and Spanish in several wars during the eighteenth century truly provided the British with a distinct economic advantage over their competition. With an expanded economic base in North America following the Seven Years’ War and the transfer of experienced seamen to the Caribbean following the War of Spanish Succession, the available markets for goods and the sailors to transport those goods expanded as well. In Jefferys’s atlas, the presence and importance of these plantations was significant enough that he felt it necessary to mark their borders within detailed maps of individual islands in the Lesser Antilles.²⁵

However, the most notable topographical descriptions of the islands actually lie off the coasts of each island through the presence of water depth indicators. These measurements, utilized by European ship captains to ensure goods safely arrived to their destinations, proved critical for the facilitation of trade in the Caribbean. Jefferys’ maps include not only depth measurements along coastal waters, but also small indicators of rocks and



FIGURE 4: A MAP OF THE WESTERN ISLANDS IN THE BAHAMAS, WITH A SPECIAL NOTE EMPHASIZING WHERE SHIPS COULD ANCHOR AND TAKE ON FRESH WATER.²⁰

other hazards located in the water.²⁶ These critical measurements and indicators dictate the importance of shipping to Europeans in the Caribbean, and further emphasize the intent of exploitation of the region’s natural fruitfulness by the Europeans. With accurate depth measurements that facilitated this exchange, European merchants eventually helped provide the basis for further economic growth in other colonies and in Europe.²⁷

To assist in the establishment of colonies within these islands, European explorers and adventurers took great care to give accurate descriptions of exotic flora and fauna within the region. In the late seventeenth century, Sloane journeyed to the Caribbean with the recently appointed governor of Jamaica, the Duke of Albemarle.²⁸ His extensive accounts of the flora in Jamaica, addressed to Queen Anne of Great Britain, constitutes one of “the largest and most considerable” collections of natural descriptions from this period.²⁹ Sloane, throughout the book, makes constant references to the potential of different plants and wildlife in providing sustenance for those who arrived. However, there do seem to be some exceptions to the natural fruitfulness of the land, including a type of seaweed that is “saltish to the taste” and “delightful to the Irish palats.”³⁰

Fauna in the region, relatively untouched by man except for native interaction, also became a very important source of sustenance for European explorers venturing throughout the Caribbean islands. Sloane mentions bird species

such as Boobies and Noddies that “suffer themselves to be catch’d by the Hand,” which further emphasizes the need of Europeans to survive on animals rather than agriculture during their long voyages. Because the voyages required being at sea for weeks at a time, food for the sailors became an absolute necessity, and fishing was the primary means of providing it. His sketches of the tropical Bonito fish and its corresponding description, for example, emphasize their rather large size and “savoury” taste.³¹ To continue development of shipping lanes and traffic, information such as this for European ship captains became vital. Making connections from home to other regions provided the European sailors with some familiarity, such as the acknowledgment of specific types of shellfish being present in both Jamaica and Scotland.³² This simple mention of a connection between foodstuffs and geography likely gave a reader of this volume residing in Great Britain a sense of perspective and a guide to where one could seek food.

MERCANTILISM AND TRIANGULAR TRADE

The ideologies of mercantilism and exchange manifested themselves through the establishment of the trans-Atlantic triangular trade networks between Europe, Africa, and the colonies of the New World.³³ The trade networks connected to the Caribbean colonies often relied on individual ship captains operating under very specific directives from their respective merchants, who resided thousands of miles away in Europe. One prominent London merchant, William Freeman, even gave one of his ship captains a directive to lie to officials who boarded their ships, a common practice among merchants in order to make sure goods reached their destinations.³⁴ Merchants formed consistent bonds with ship captains that made regular voyages to the New World territories like Jamaica generally out of a need for familiarity and consistency in dealings.³⁵

In terms of mapping, Jefferys clearly realizes the vast array of shipping throughout the Caribbean during the period of triangular trade, and he decorates many of his maps with illustrations of his ships on the open seas. These ships, pictured in countless different locations, seem to concentrate around regions where shipping is at its highest volume in different channels or straits. Throughout the maps, many of these pictured ships follow the directions of the small “darts” which represent the currents on the open seas.³⁶ To ship captains and merchants, these current markings are an invaluable tool for navigation and transporting goods at a more rapid pace than relying on wind alone.

Jefferys and his editor make other allusions to practices such as the cultivation of sugar throughout the atlas. The map key of St. Vincent in the Lesser Antilles notes that the island possesses twenty-two rivers capable of driving sugar mills, which indicates the importance of sugar cultivation in the region.³⁷ The trials and tribulations of agriculture extended far beyond the English realms however, as the French in La Martinique discovered during the eighteenth century. With little progress made in the production of cacao or sugar, the planters on the island started producing coffee beans that became a raging success.³⁸ Likewise, in Puerto Rico, Jefferys describes how the island does not produce enough goods beyond the basic needs of its “lazy possessors.”³⁹ This blatant and unwarranted bias against the Spanish likely stems from historical conflicts with the Spanish, some of which led to Jefferys gaining possession of many of the maps in the first place.

CONCLUSION

Accurately describing, much less depicting, a varied landscape such as the Caribbean presented an enormously challenging task for the cartographer Thomas Jefferys during the eighteenth century. His work, along with that of other Europeans, utilizes several different methods to accomplish this task, and consequently provides modern day historians with a perspective on the region and mercantilism. Through an analysis of imagery within Jefferys’ maps and the methods he utilizes to describe geography and his important references to trade and mercantilism, the general European viewpoint on the Caribbean seems clear. As a tropical land with a favorable climate for the cultivation of sugar, tobacco, indigo, coffee beans, and cacao, the Caribbean region represented an enormous opportunity for exchange during the eighteenth century. This trade, manifested through the practice of triangular trade as well as the economic doctrine of mercantilism, dominated every aspect of Caribbean colonial life during this time.

However, the most important role the Caribbean played during the colonial era truly came after the eighteenth century, when the goods it exported helped provide the capital for industrialists and economies to expand in the Industrial Revolution. Analysis of the economic exchange in the Caribbean unfortunately never takes into account the lasting human impact on people such as African slaves or Native Americans living in the Caribbean. For example, on the passage from Africa to America, slave mortality rates ranged from 8.2-21 percent.⁴⁰ These figures, while shocking themselves, do not even account for the countless oth-

ers who passed away from the malicious treatment received on the plantations in the region. European mortality rates, while evidently lower, also create a deeper understanding of the horrid conditions that many of the colonizers went through during the triangular trade era.

The suffering that many people endured in the Caribbean during this time are tragedies best classified as silences within these maps. They are also representative of the major disadvantages to the economic development of the region. Instead of trying to describe these horrific stories, Jefferys creates a series of truly remarkable and incredibly detailed maps that likely facilitated the passage of ships and cargo, and gives a much clearer understanding of life in the Caribbean at the time. This understanding really serves a dual purpose, however, as it both feeds into the romanticized European image of the exotic colonial Caribbean while telling a mercantilist history of the region. His atlas, although it does not specifically argue for mercantilist ideals, clearly embodies the principles of this colonial economic system and focuses specifically on the aspects of naval commerce. Jefferys, and other Europeans like him, understood that accurate maps of this region could facilitate the development process and provide merchants with the best possible opportunity for successful exchange of goods in the colonial era.

ENDNOTES

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4. Jefferys, *The West Indian Atlas*, i.
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9. *Ibid.*, Plate 2.
10. *Ibid.*, Plate 5.
11. *Ibid.*, Plate 4.
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16. *Ibid.*, Plate 8.
17. *Ibid.*, iv.
18. Sir Hans Sloane, *A Voyage to the Islands Madera, Barbados, Nieves, S. Christophers and Jamaica, with the Natural History ... of the Last of Those Islands; to Which Is Prefix'd an Introduction, Wherein Is an Account of the Inhabitants, Air, Waters, Diseases, Trade, &c. ... Illustrated with the Figures of the Things Describ'd, ... By Hans Sloane, ... In Two Volumes. ...* London: printed by BMfor the author, 1707.
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34. David Hancock, *The Letters of William Freeman, London Merchant, 1678-1685 (London Record Society)*, (London: London Record Society, 2002), 31.
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36. Jefferys, *The West Indian Atlas*, Plate 7.
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38. *Ibid.*, 25.
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PERFORMING REDEMPTION

Metzian Theology in the Art of Kendrick Lamar

EVAN GOLDSTEIN

THE GERMAN CATHOLIC THEOLOGIAN JOHANN BAPTIST METZ MAKES A CONVINCING CASE THAT IN THE FACE OF THE CATASTROPHES OF THE 20TH CENTURY, CHRISTIAN THEOLOGY CAN NO LONGER ISOLATE ITSELF FROM ITS ROLE AS A PERPETRATOR OF INJUSTICE. TO THAT END, HE SEEKS TO CHALLENGE ABSTRACT ANSWERS TO THEOLOGICAL QUESTIONS WITH A RENEWED SENSITIVITY TO PAST TRANSGRESSIONS. FOR METZ, CHRISTIAN FAITH CANNOT SIMPLY BE A MATTER OF ASSENT TO THEORETICAL PROPOSITIONS, BUT RATHER A PRACTICAL ENGAGEMENT WITH “DANGEROUS MEMORIES” OF SYSTEMATIC INJUSTICE. IN THIS PAPER, THE AUTHOR TAKES UP METZ’S CONCEPTUAL FRAMEWORK FOR POLITICAL THEOLOGY AND USES IT TO EXAMINE KENDRICK LAMAR’S “SING ABOUT ME, I’M DYING OF THIRST” AS A THEOLOGICAL, AND SPECIFICALLY SOTERIOLOGICAL, PERFORMANCE. BY RE-TELLING IN HIS OWN VOICE THE STORIES OF FRIENDS WHO HAVE DIED, KENDRICK BOTH DOCUMENTS THE STRUGGLE THEY LIVED AND REVEALS HIS OWN VULNERABILITY TO THE SAME CONDITIONS (OF SIN). BUT IN ADDRESSING THIS VULNERABILITY, HE TRANSCENDS IT, PROTECTING HIMSELF FROM SIN PRECISELY BY TELLING THE STORY. THE PAPER CLOSES WITH SOME REFLECTIONS ON HOW KENDRICK’S TRACK MIGHT GESTURE TOWARDS A MODE OF DOING THEOLOGY THAT SUBVERTS THE ABSTRACT TENDENCIES OF THE HEGEMONIC WESTERN TRADITION.

Towards the end of his life, the philosopher Walter Benjamin wrote that, “the true picture of the past flits by...[and] can be seized only as an image which flashes up at the moment when it can be recognized and is never seen again.”¹ According to this view, philosophical inquiry cannot presuppose the accessibility of a universal history as such, but rather must seek absolute truth in and through the concrete “temporality” of every historical moment.² Through this thesis, Benjamin did not intend to merely criticize modernity’s prevailing bourgeois history (*qua* history of progress), but also to articulate the task of the philosopher as “to seize hold of a memory as it flashes up in a moment of danger,” and to establish these memories as the inaugural site of a constructive, critical response.

The German Catholic theologian Johann Baptist Metz appropriates Benjamin’s thesis in his call for a Christian theology grounded in “dangerous memories” of suffering.³ Reacting against a corrupted theological discourse that he terms “bourgeois religion,”⁴ Metz articulates the need for a “practical, fundamental theology of the subject” that does not flee from history but rather attempts to talk about God in view of history’s victims.⁵ At the center of this attempt is the theodicy problem, or “the question of how one is to talk about God in the face of the abysmal histories of suffering in the world.”⁶ Metz criticizes mainstream theology for prioritizing soteriology over theodicy, producing a “soteriologically-overdetermined” discourse which he suggests functions as an “exoneration mechanism” alleviating the bourgeois subject’s responsibility for suffering in history.⁷ Against abstract theologies of justification, Metz maintains that a “purely argumentative soteriology” (one that

does not account for histories of suffering) reenacts the bourgeois banishment of religion to the private (and thus, non-political) sphere, thereby uncritically affirming the prevailing socio-political order. Instead, following Benjamin, Metz re-articulates faith as a “praxis in history and society” that struggles to speak about God from the underside of modernity.⁸

In this paper, I read Kendrick Lamar’s “Sing About Me, I’m Dying of Thirst” as a performance of dangerous memory.⁹ Specifically, I read this song as a soteriological performance, one in which the artist struggles for redemption from what he explicitly frames as a condition of sin. The sin Lamar confronts is not the abstract, ontological sin of the dominant Christian tradition of theological anthropology, but rather a social condition of “dying of thirst,” described in the second half of the two-part track. Lamar’s performance of dangerous memory operates on two levels: On the one hand, Lamar’s stories of friends who have passed function as representations of the lived experience he characterizes elsewhere as “[growing] up ‘round some people livin’ they life in bottles.”¹⁰ In other words, the stories are descriptions of the sinful reality Lamar inhabits. At the same time, Lamar speaks from within that reality, and therefore presents himself as vulnerable to its destructive tendencies as well. As such, the song (including his embodiment of others’ stories) itself functions soteriologically.¹¹ Lamar does not simply represent his struggle against sin, but indeed performs that struggle in and through his music.

Thus, “Sing About Me, I’m Dying of Thirst” is a musical performance of Metz’s soteriology, which is neither “purely argumentative” nor content to stop at rationally-deduced propositions, but rather represents the drama of salvation (and, truthfully, of theology itself). Lamar’s soteriology is unstable, resisting the pervasive influence of sin at the very moment that he performs his vulnerability to sin’s destruction and his ultimate inability to overcome sin on his own.¹² He expresses, we might say, a dialectic of resistance and vulnerability, which is the situation of a “good kid” in a “m.A.A.d city.”¹³ As such, the theological resonances of his work are not important simply for understanding his musical project, but also make a contribution to theology itself. Following Metz, theological truth cannot be deduced from within the walls of the academy, but must ground itself in the dangerous memories that convey the ambiguity of speech about God. As such, my aim is to read Lamar in a way that problematizes abstract conceptions of salvation and reveals the danger of speaking about God.



LAMAR PERFORMING AT WAY OUT WEST IN AUGUST 2013
(COURTESY OF WIKIMEDIA COMMONS)

“PROMISE THAT YOU WILL SING ABOUT ME”:
REPRESENTATION AT THE BOUNDARIES OF LIFE
AND DEATH

“Sing About Me, I’m Dying of Thirst” is the penultimate track on Kendrick Lamar’s debut major-label album, *good kid, m.A.A.d city* (2012). Like every song on the album, it is a memoiristic portrayal of Lamar’s life in Compton. In many ways, *good kid, m.A.A.d city* is less a sequence of divergent tracks than it is a continuous, unified narrative of suffering, struggling, swaggering, sex, and much more. One hesitates to name a primary theme, for fear of obscuring other indispensable elements of the work; however, to the extent that we can venture to do so, we might draw on James H. Cone’s characterization of the spirituals and the blues: “Black music...is not an artistic creation for its own sake; rather, it tells us about the *feeling* and *thinking* of an African people, and the kinds of mental adjustments they had to make in order to survive in an alien land.”¹⁴

The particular focus of this study, “Sing About Me, I’m Dying of Thirst,” unfolds in two parts of about six minutes each. The first part opens with its hook: “When the lights shut off, and it’s my turn to settle down/My main concern: promise that you will sing about me.” Already, the Metzian resonances of this track come through, as the voice (perhaps Lamar’s but it is left somewhat unclear) implores someone (perhaps Lamar, perhaps the listener; again, it is not specified; as we shall see, the identity of both the voice and the addressee shift throughout the track in significant ways) to retell their story after they are gone. Even this opening line, simple as it is, conveys something important about the speaker: namely, that they feel compelled to consider how others will memorialize them. Important for a comparison with twentieth century philosophy and theology, the fact of death’s possibility (and even imminence) does not itself appear to be troubling; rather, what concerns this speaker is whether and how they will be remembered. Thus, it is already apparent that what we are hearing disrupts an abstract, existential mode of being in the world, in which the fear of death is the primary crisis of human existence.¹⁵

The following two verses present two stories of Lamar’s friends who have passed, suggesting an answer to the question of who it is that urges Lamar to sing about them. Both stories, however, are recounted in Lamar’s voice, presenting an interesting interplay between remembrance-ing (*Eingedenken*) and remembrance-er (i.e., the one who is remembering) that shall be explored in more depth below.¹⁶ The theme suggested in the hook-of death’s imminent possibility, or, possible imminence-pervades the first verse. Beginning, “I woke up this morning and figured I’d call you/in case I’m not here tomorrow,” the verse’s “protagonist” is a gang member whose slain brother (identified in the previous track as Dave) was close with Lamar.¹⁷ Indeed, we learn that Lamar held Dave as he died.¹⁸ The verse centers around the inability of Dave’s brother to extricate himself from the gang life, which is presented as an irrevocable, almost intrinsic quality of his personhood. He draws upon the language of biology and disease, declaring his situation as the “prognosis of a problem child,” juxtaposed against Lamar’s musical “recovery.”¹⁹ Thus, he has called Lamar to “borrow a peace of mind”; in other words, a brief (and temporary) respite from the ineradicable “piru shit [that’s] been in me forever.”²⁰ He displays a certain ambivalence about this condition. On the one hand, he acknowledges that he is “behind on what’s really important,” but he also describes his violent reaction to his brother’s murder in blood-chillingly mundane terms: “As blood spilled on your hands/my plan’s rather vindictive/...a demon glued to my back, whispering ‘get ‘em’/I got em/and I ain’t give a fuck.”

This verse’s seemingly contradictory dynamic exemplifies what I consider to be the central problematic of the song: being stuck in a seemingly irrevocable situation of violence, wherein resistance seems completely hopeless and passive acceptance inevitably results in death. There is a sense of proximity to death, evidenced by the verse’s opening, as well as its ending, in which Dave’s brother tells Lamar, “if I die before your album drop, I hope—before he is abruptly cut off by gun shots, and we are left to wonder for what he dared hope.”²¹ His call to Lamar functions both to express that hope before the former’s

“Lamar does not simply represent his struggle against sin, but indeed performs that struggle in and through his music.”

impending death (to which he was especially vulnerable because of the conditions of his life), and to ensure an afterlife for his hope beyond bodily death. The desire to have one's story retold does not, in this instance, stem from vanity, but rather from the (perhaps unspoken) conviction that to be forgotten would be to reinforce the system responsible for one's death. If, as Max Horkheimer and Theodor Adorno suggest, "the capacity to be represented is the measure of power," then to insist upon posthumous representation is to hope that one might matter in death, even when one's life is systematically neglected and discarded.²² This is the representation of the underside of Metz's *Eingedenken*, not the academic specialist seeking critical distance from bourgeois thought-forms, but the precarious subject himself anxious about the prospect of being posthumously disregarded.²³

The second verse expresses similar themes—being stuck in cycles of destruction (and self-destruction) with death as a constant possibility—but in a somewhat modulated form. Here the "speaker" is the sister of Keisha, a slain teenaged prostitute whose story Lamar previously recounted (from a third person perspective) on the track, "Keisha's Song (Her Pain)."²⁴ In contrast to the cordial tone of the previous verse, Keisha's sister criticizes Lamar for "judging her [sister's] past" by "put[ting] her on blast" in "Keisha's Song."²⁵ Immediately, though, the verse comes back to her present ("her past...well, it's completely my future"), as a prostitute for her sister's pimp. Juxtaposed with the first verse, her narration represents the second of two (gendered) roles available to Compton's children in situations of economic exigency: men can become gang members, and women can become prostitutes.²⁶ The latter shares the former's proximity to death; even as Keisha's sister proclaims that, "I'll probably live longer than you, and never fade away," she knows that her survival is at stake and in jeopardy ("I'm on the grind for this cake/I'ma get it or die trying"). Like Dave's brother, Keisha's sister characterizes her situation in biological terms, as a "family gene," thus underscoring its insurmountability.

Keisha's sister does not just criticize Lamar for using Keisha's story, but also calls into question the possibility articulated in the previous verse that Lamar's music might be a source of "recovery."²⁷ Indeed, her criticism of Lamar's previous attempt at representing black female experience articulates at the same time the possibility that the present representation will fail. This brings us to the second, and perhaps more important, layer of these opening verses: Lamar is not simply telling the story of others' but

is, in fact, telling us his own story through that very representation. Thus, we cannot simply read this as a portrayal of gendered navigation of the ghetto, but must also ask where Lamar is situating himself in this narrative matrix,



KENDRICK LAMAR AT GROÙE FREIHEIT 36, HAMBURG
(COURTESY OF WIKIMEDIA COMMONS)

as well as what the track does for him; in other words, if the actual narrators of the two verses (whose words, it must be noted, we do not actually hear in an unmediated form) speak in order to both represent and resist their circumstances, what is being performed by Lamar's representation of those representations?²⁸

To this point, we have seen that the opening two verses of "Sing About Me, I'm Dying of Thirst" represent life on the boundaries of life, wherein death is constantly, to borrow a phrase from Tupac Shakur, just "around the corner."²⁹ The narrators narrate with the intent of reclaiming their humanity from death-dealing systems that have forced its negation, even as they acknowledge the ultimate impossibility of transforming their situation. It might, therefore, be unclear what the theological dimension of this track is.

As I have suggested, though, the primary locus of our analysis is not simply what is represented in those verses, but what is represented in Lamar's performance, which is explicitly framed not just in terms of death and life, but also of sin and redemption. Lamar's performance navigates the ghetto in search of redemption, which comes partially in and through his musical resistance to pervasive social sin, but ultimately only through a Messianic intervention that re-inaugurates, and thereby redeems, time itself.

"I'M DYING OF THIRST": KENDRICK LAMAR'S SOTERIOLOGICAL IMAGINATION

Though this section of the paper deals primarily with the "Dying of Thirst" section of the track, we must begin our considerations with Lamar's verse in the "Sing About Me" section. As I have already suggested, Lamar's verse here marks the transition from the retelling of others' stories to a response to his deceased friends, as well as telling his own story. Indeed, Lamar situates himself within the social world of those whom we must sing about to keep alive, indicating the way in which the previous verses were also, in a meaningful way, "Lamar's verses," though this is the first one that directly expresses his perspective.

As with the previous two verses, Lamar is "infatuated with death" and aware of its proximity. Lamar himself confirmed in an interview with RapGenius that "that whole verse is about grasping the idea of death, for a kid [in Compton]." In the early part of the verse, he sounds a prayerful wish that "if I'm doomed/may the wound help my mother be blessed for many moons." This also captures an essential dialectic of the verse, and the song as a whole: Rap music functions both as "the wound," since his lyrics "make sure that my lifeline/reeking the scent of a reaper, ensuring my allegiance/with the otherside may come soon," and as a saving grace. Lamar suggests that the fate of his previous two interlocutors is "exactly what'd happen if I ain't continue rapping." Indeed, these stories form the basis of his music ("By any means, wasn't tryna offend or come between/her personal life, I was like, it need to be told"), and compel him to "count lives all on these songs" even as that very act draws danger to him. Lamar's self-implication in the cycle of destruction that killed his friends alters the meaning of the hook. No longer is the voice we hear simply the words that prompt Lamar to make the track; we now hear Lamar addressing himself to his listeners,

bringing us under the obligation of telling his story, precisely as he has done for others, in the (not inconceivable) event of his death. The conclusion of the verse sounds a poignantly simple challenge: "Am I worth it?/Did I put enough work in?"

Unlike the previous two verses, the nearness of death is conceived in soteriological terms. Lamar hopes to "hear a cry out from heaven so loud it can water down a demon/with the holy ghost 'till it drown in the blood of Jesus." It becomes clear, throughout this verse and into the "Dying of Thirst" section, that Lamar does not simply figure his situation in terms of suffering and pleasure (as one might wrongly surmise from tracks like "Swimming Pools (Drank)" and "m.A.A.d. city"), but precisely as sin and repentance, a reading that becomes more apparent with Maya Angelou's intervention at the end of the song ("See, you young men are dying of thirst. Do you know what that means? That means you need water, holy water. You need to be baptized with the spirit of the Lord").

Following a brief dramatic interlude (the significance of which we shall examine later), the track transitions into



GRAFFITI OF JESUS AT CORSO DI PORTA TICINESE (MILAN)
(COURTESY OF WIKIMEDIA COMMONS)

“Dying of Thirst.” The tempo speeds up as the “Dying of Thirst” beat rises underneath the frustrated final words of the interlude: “Fuck, I’m tired of this shit! I’m tired of fuckin’ runnin’, I’m tired of this shit!”³⁰ Lamar takes up this refrain (“tired of runnin’”), interspersing each repetition with an esophageal “uh,” as if to indicate a breathlessness induced by the *accelerando*. Lamar rehashes familiar scenes: casualties of gang violence,³¹ unfulfilled hopes,³² and his own sense of being trapped in sinful structures.³³ Here the operation of his music as resistance to sin is made explicit, as he “hope(s) we can tower/over the city with vanity with the music louder,” using success as an artist to drown out the sounds of gang violence. More specifically, he promises to “show you how to/dye your thirst,” suggesting that the expressions of “a black flower” (and here he evokes Tupac’s “The Rose that Grew From Concrete”) cannot *eliminate* sin, but can mitigate its influence.

This is a crucially important bar, insofar as it captures the central thrust of Lamar’s soteriological argument: Lamar’s music performatively constitutes itself as a necessary but not sufficient soteriological mechanism. This is to say, Lamar’s struggle for salvation from conditions of social sin takes place in and through his performance, rendering the performance soteriologically obligatory, but that salvation is not complete. Thus, though the second half of “Dying of Thirst” becomes increasingly, and more traditionally, soteriological, it would be wrong to read Lamar as advocating a simple “conversion.”³⁴ Though his final exhortation (citing his mother) is to “hop in that water, and pray that it works,” Lamar is not advocating an abstract “acceptance” of God’s grace as an entirely soteriologically efficacious act. Without attempting to situate Lamar’s logic of salvation within the Protestant-Catholic divide, one might read Lamar as saying that we cannot do nothing in our salvation. For Lamar, salvation is a struggle, a drama, a project, something that must be continually *enacted*. Importantly, Lamar’s soteriology questions its own efficacy, containing within itself a reflexive awareness of the possibility of its own failure. Because the struggle for salvation is tied to certain social con-

ditions, it is not a purely individual project, but one that we as listeners are exhorted to become partners in. Indeed, perhaps one of the effects of Lamar’s track is to enter into a relationship with those distant from himself, giving soteriology a translational character that implicates us all in each others’ salvation. We are called to discern our complicity in the perpetuation of sinful structures and reminded that our salvation is conditioned by the eradication of all sin. Lamar’s track is a call, which demands a response from those with ears to hear.

Lamar performs Metz’s critique of soteriology in another crucial respect: He ties redemption from sin with the anticipation of a future messianic intervention. As previously noted, the two sections of the track are divided by a skit that dramatizes the reaction of Dave’s brother to Dave’s death. Following Lamar’s “Dying of Thirst” verses, we return to that scene, but this time we hear a new voice: Maya Angelou, who recognizes that the boys are “dying of thirst” through their sin, and leads them through a version of the Sinner’s Prayer, pronouncing this action as “the start of a new life: your real life.” Of course, we know, or can at least suspect, that this did not actually happen, as we have already seen how Dave’s brother reacts.²⁹ Thus, Angelou’s intervention should be understood as Lamar’s imaginative dramatization of salvation itself, one that projects hope for a messianic future through the conjuring of a redeemed past. By dramatizing a past in which the arrival of death was not inevitable (for Dave’s brother, and, by extension, for Lamar himself), Lamar expresses hope in a future in which redemption is possible. In other words, Lamar imagines a salvific life where “death doesn’t reside” not as eternal life, but as “real life.”³⁵ Though he is not sure the water will work, he yearns for the intervention of someone who might give him a new life, a real life.³⁶ Further, despite the usage of a fairly standard evangelical prayer, I would suggest that to see Lamar as advocating a purely interiorized “acceptance” of Jesus Christ’s salvific status is a misreading. To the contrary, we must understand this skit in the context of what Lamar has already shown us regard-

“By dramatizing a past in which the arrival of death was not inevitable (for Dave’s brother, and, by extension, for Lamar himself), Lamar expresses hope in a future in which redemption is possible.”

ing the soteriological status of his music. Angelou's intervention represents a messianic vision of a life beyond the constraints of death's nearness. Salvation, then, is not "heaven" or "sinlessness," but rather life itself. Only with the coming of the Messiah will life not be tainted by the proximity of death, as it is elsewhere in the track. The hope in a messianic intervention does not negate the imperative of political and aesthetic struggle against sin (which is what the rest of the track does), but merely emphasizes that ultimate soteriological efficacy lays beyond the boundaries of struggle alone. Thus, Lamar's track functions as a "witness for the future" of redemption, without legitimizing the present on the basis of the future's possibility.³⁷

We have seen the contribution that theological analysis can make to an appreciation of "Sing About Me, I'm Dying of Thirst"; what can theological discourse learn from Lamar's track? On one level, the contribution is obvious: Lamar's performance is an enactment of Metz's criticism, a demonstration of what a soteriology looks like when it refuses to be, because it cannot be, "purely argumentative." Another way of putting this (one that resonates with Metz's own language and the language of the Frankfurt School) is that Lamar's track is an example of a non-mythological soteriology. But on a deeper level, I want to suggest that Lamar's track functions as a critique of the theological enterprise itself. Once we acknowledge that Lamar is *doing* theology, we have already destabilized the hegemonic claim of the academy to be a privileged domain of Theology as such. Indeed, to even portray theology as something that must be *done* (understanding this verb in its most active sense) requires that we consider the possibility of theology beyond the academy. In so doing, we must distance ourselves from the label "theologian," at least to the extent that we acknowledge that a "theologian" might not simply be one who studies, teaches, and writes theology in an academic context. I see this self-critical distancing as a positive move, insofar as it urges us to continually discern whether we are truly *doing* theology, in conversation with the painful losses, unfulfilled hopes, and subversive beauty of the world we cohabit,³⁸ or whether we are simply going through the motions, however artfully, in a space that is ultimately not innocent.³⁹

Reading Lamar's performative soteriology next to Metz's interruptive theodicy suggests that questioning the possibility of theology is an essential precondition of theology itself. Theology cannot simply seek to include the excluded (though it should certainly do this), but must also de-center hegemonic notions of what it is to do theology, essen-

tially undermining its own validity. Discourses of "inclusion," while not altogether unhelpful, risk maintaining the centrality of Theology, hegemonically understood, and merely establishing terms of entry for marginal voices.⁴⁰ The reading of "Sing About Me, I'm Dying of Thirst" that I have proposed here challenges us to go beyond inclusion to re-conceptualizing theology itself, a move that I suggest is prefigured in Metz (though he remains rather vague about what such a theology beyond Theology might look like, and continues to do theology in a basically conventional way).

Lamar presents an alternative foundation upon which to build the theological guild: Rather than seeking to produce praiseworthy essays and books, or to bring people to conversion, the task of the theologian is to sing a song of hope in a world of sin, to attempt to demonstrate how to "dye your thirst" without resorting to naïve platitudes. Such a task is, as Metz suggests, basically apologetic, a defense of (Christian) hope that does not prescind from the darkness of history but rather struggles against it.⁴¹ The theologian poses "disturbing questions" as a practical strategy for survival, carrying on the cause of the forgotten past while anticipating the real life of the salvific future.⁴²

ENDNOTES

1. Benjamin, *Theses on the Concept of History*, 253-264.
2. Buck-Morss, *The Dialectics of Seeing: Walter Benjamin and the Arcades Project*, 19-20.
3. Metz, *Faith in History and Society*, 109ff, 200ff.
4. Metz, *The Emergent Church: The Future of Christianity in a Post-Bourgeois World* 1-16.
5. Metz, *Faith in History and Society*, 46-47, 60-70, 183-237.
6. Metz, *A Passion for God: The Mystical-Political Dimension of Christianity*, 56ff.
7. Metz, *Memoria passionis: eine provozierendes Gedachtnis in pluralistischer Gesellschaft*, 57.
8. Metz, *Faith in History and Society*, 73.
9. From the 2012 album, *good kid, m.A.A.d. city*. Though the title is somewhat lengthy, I will continue to cite it in full due to the structure of the track, which consists of two distinct sections that could function as songs in their own right. The first repeats the refrain “promise that you will sing about me,” while the second is organized around the repetition of “dying of thirst.” Thus, to avoid the perception that I am referring to only the first half of the track, I will refer to it by its full title. See the full lyrics (with crowd-sourced annotations) here: <http://genius.com/Kendrick-lamar-sing-about-me-im-dying-of-thirst-lyrics>.
10. Lamar, “Swimming Pools (Drank)-Extended Version,” *good kid, m.A.A.d. city* (2012).
11. See also his “Poetic Justice” on the same album: “I could never right my wrongs unless I write it down, for real.”
12. Cf. Walter Benjamin’s “Theses,” in which “the Messiah comes not only as the redeemer, he comes as the subduer of the Antichrist,” (p. 255). I read Kendrick’s resistance to history’s un-redeemed status alongside the salvific intervention of Maya Angelou at the song’s ending in a similar manner. The salvation Kendrick envisions is not merely a positive state of redemption, but an overcoming of social sin.
13. This framing is supported by the meanings of the acronym “m.A.A.d,” which signifies both “My Angry Adolescence Divided” and “My Angels on Angel Dust.” Both meanings (as well as the word as it is vocalized: “mad city”) represent the dialectic I describe here, of a subject who seeks to resist destructive social influences while simultaneously participating in them.
14. Cone, *The Spirituals and the Blues: An Interpretation*, 98 (emphasis original). To be sure, this description cannot be uncritically appropriated in this case. For instance, Kendrick does not necessarily understand his project as navigating “an alien land” (Compton is his home), and one can debate what the label “an African people” might mean in terms of Kendrick’s musical project. Still, Kendrick’s album is, broadly speaking, an expression of the thinking and feeling of the good kid navigating a mad city. Moreover, though Kendrick seems to display a deeply-engrained need to be in the studio, creating, he has repeatedly emphasized that he intends his music to have a broader impact. It is thus not “an artistic creation for its own sake,” but rather a project that grapples with, and seeks to resist, concrete conditions of suffering.
15. J. Matthew Ashley describes how Metz’s theology seeks to move beyond an abstract problematic of finite/infinite: “Just as the *Seinsfrage* for Heidegger and Rahner irritates us, keeps us from closing ourselves off in some finite realm of beings in our attempts to understand what it means to be human, so in Metz’s thought does the theodicy question irritate us. It keeps us from falling into the various exculpation strategies which entrap us in the dialectic of enlightenment, opening up instead the possibility of a different existentiell stance toward our involvement in the world and history,” (p. 160). See also Metz in “Communicating a Dangerous Memory”: “The basic theological question...is not ‘who saves me?’ but rather, ‘who saves you?’...the question, ‘what dare I hope?’ is transformed for me into the question, ‘what dare I hope for you, and, in the end, also for me?’” (p. 40). This is not precisely what is expressed here, in the opening moments of “Sing About Me, I’m Dying of Thirst,” but it does shed light on Metz’s re-orientation of theological reflection towards the voices of those who suffer. Moreover, the perspective heard in Kendrick’s track, which is alien to the more theoretical fundamental anthropologies of thinkers like Rahner and Heidegger, validates Metz’s claim that sensitivity to dangerous memory presents an interruptive challenge to “mainstream” theology, a challenge that cannot go unanswered.
16. *Eingedenken* is a German neologism coined by Metz most nearly meaning “remembrance-ing” in the liturgical sense of “do this in memory of me.” See Metz, *See A Passion for God*, p. 181, n. 10; and Ashley, p. 161-162.
17. See “Swimming Pools (Drank).”
18. “You ran outside when you heard my brother cry for help/ held him like a newborn baby, and made him feel/like everything was alright.”
19. “In actuality, it’s a trip how we trip off of colors/I wonder if I’ll ever discover/A passion like you and recover.”
20. “Piru” refers to a street in Compton that is associated with the Bloods. Dave’s brother is underscoring his quasi-intrinsic inability to resist the gang life. It is crucially important to that his somewhat biological language not be equated to racist stereotypes of black criminality that often cite gang activity as “evidence.” The fact that he is unable to extricate himself from cycles of gang violence should not imply a negative moral judgment against him. Indeed, that Kendrick embodies the narration of a gang member (who, in this very verse, admits to killing a rival gang member) and, later, a prostitute, demonstrates that his intent is not to moralize, but rather to humanize.
21. Cf. J. Kameron Carter’s discussion of abjection as “a figure neither of life nor death but of living death” in “The politics of the atonement,” *The Immanent Frame*, July 18th, 2011, <http://blogs.ssrc.org/tif/2011/07/18/the-politics-of-the-atonement/>. See also his (theological) genealogy of racialized “death-bound subjects” in *Race: A Theological Account* (Oxford University Press: Oxford, UK, 2008), p. 79-121, especially 118-121.
22. Max Horkheimer and Theodor Adorno, *Dialectic of Enlightenment: Philosophical Fragments* trans. Edmund Jephcott (Stanford University Press: Stanford, CA, 2002), p. 27. Tupac Shakur, whose music serves as a major influence on Kendrick,

articulates the (un)representation of black people (specifically men) as a socio-political problem. See, for instance, “My Block” (“Only time they notice a n****a is when he’s clutchin on a four-five”), “Me Against the World” (“What’s the use/unless we shootin/no one notices the youth”), and “Thugz Mansion” (“No one knows my struggle/they only see the trouble”). Tupac also expresses the emotional dimension of society’s disregard for black men in an early poem: “[The world] is painful and sad and sometimes I cry/and no one cares about why.” See “Sometimes I Cry” in *The Rose that grew From Concrete* (Pocket Books: New York, NY, 1999), p. 7. Though Kendrick’s album (and especially this track) tends to stay in the register of narration rather than manifesto, the socio-political dimensions that Tupac articulates are undoubtedly present.

23. I borrow the concept of “precarity” from Judith Butler, who takes it to mean the basic state of physical vulnerability that is the precondition of embodied, socio-political existence. Butler suggests that the unequal social distribution of precarity (i.e., certain people and groups of people are systematically more susceptible to physical violence and death than others) inscribes a “hierarchy of grief,” in which the nation-state reproduces itself via public adjudication of whose life is grievable, and, thus, which people are people. See Butler, *Precarious Life: The Powers of Mourning and Violence* (Verso: New York, NY, 2006), p. 19-49.
24. See Kendrick’s debut studio album, *Section.80* (2011).
25. It’s unclear if Keisha’s sister objects to a particular element of the song (one could imagine her taking issue with the ending, in which Kendrick plays the song for his little sister as a cautionary tale) or the fact that Kendrick made the song at all. Nonetheless, her objection to being represented stands in stark contrast to the previous verse, as well as the song’s hook.
26. Indeed, Keisha’s sister (or, perhaps here the voice of Kendrick) frames her prostitution as “a family gene that shows women how to be woman.” Prostitution, for her, functions pedagogically, to inscribe and reinforce particular gendered performances.
27. “You lying to these motherfuckers, talking ‘bout you can help them with my story/You can help me if you sell this pussy for me, n****a.”
28. Another question that must be asked is what is left out of Kendrick’s representations. It would be a mistake to entirely identify Kendrick’s re-narration of their narrations with the narrations (and, even more so, experiences) themselves, and thus it is important to discern what is excluded. A full exploration of this dimension of representation, however, is beyond the scope of this essay. For our purposes, it is sufficient to note that Kendrick represents these narrations in order to express something about himself, and to do something; it is that “something” which constitutes the primary focus of this essay.
29. See Tupac, “Death Around the Corner,” *Me Against The World* (1995).
30. As we shall see, these are the words of Dave’s brother (the slain gang member voiced by Kendrick in the track’s first verse). We finally hear, in his own words, the anger he over the murder of his brother that he communicated to Kendrick, anger that, as we already know, leads him to kill in revenge, and ultimately

leads to his death.

31. “Daughter is dead, mother is mournin’ her.”
32. “Dreams of balling, like Spalding/but only shotty bounce.”
33. “It’s hard to channel your energy when you know you’re crooked/Banana split, split his banana pudding/I’m like Tre, that’s Cuba Gooding/I know I’m good at dying of thirst/dying of thirst/dying of thirst.”
34. The final two verses of “Dying of Thirst” (according to the numbering on RapGenius) declare that “hell is hot, fire is proven/to burn for eternity.” Interestingly, Kendrick returns to the use of biological language, terming his sinfulness “hereditary, all my cousins/dying of thirst, dying of thirst, dying of thirst.” In the final verse, Kendrick’s rapping is actually interrupted by a plea for redemption (“Lord, forgive me for all my sins for I do not know...”), and the track’s final lyrics are Kendrick’s recollection: “Back once my momma say/see a pastor, give me a promise/what if today was the rapture and you completely tarnished/the truth will set you free, so to me be completely honest/you dying of thirst, you dying of thirst/so hop in that water, and pray that it works.”
35. See Nas’s remix of Tupac’s “Thugz Mansion,” *God’s Son* (2002).
36. Cf. The track “Real” on *good kid, m.A.A.d. city* (2012).
37. Pierre Bouretz, *Witnesses For The Future: Philosophy and Messianism*, 6-11, 200ff. The phrase “witnesses for the future” is found in a 1927 letter from Walter Benjamin to Gershom Scholem, in which history is described “as a trial in which man as an advocate for mute nature makes a complaint against the nonappearance of the promised Messiah. The court, however, decides to hear witnesses for the future.” The artist, then, produces a vision of the future as a witness for messianic hope, even when the rest of society has left the courtroom entirely.
38. I evoke “cohabitation” rather than “inhabitation” in keeping Butler’s understanding of our political existence as constituted by the condition of sharing the world with others with whom we did not choose to cohabit. See Butler’s *Parting Ways: Jewishness and the Critique of Zionism* (Columbia University Press: New York, NY, 2012), p. 23-24, 43-44, 125-131, 151-180.
39. Rieger, *God and the Excluded: Visions and Blind Spots in Contemporary Theology*, 1-16.
40. Rieger, *God and the Excluded: Visions and Blind Spots in Contemporary Theology*, 113-123.
41. See the introduction to *Faith in History and Society*. I put Christian in parenthesis because I do not believe that this reading of Kendrick’s soteriological vision need be relegated to a particular religious tradition, though obviously it may not apply equally well for all traditions.
42. Metz, *A Passion for God*, p. 66.
- 43.

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NEITHER RED NOR BLUE

The Influence of Independent Voters in Massachusetts

OLIVIA MCCAFFREY

IN A TIME WHEN CANDIDATES FEEL PRESSURE TO TOUT THEIR INDEPENDENT ATTITUDE AND BIPARTISAN SPIRIT IN ORDER TO WIN ELECTIONS, THE GROWING PRESENCE OF THE INDEPENDENT POLITICAL MINDSET AMONG VOTERS CANNOT BE IGNORED. MASSACHUSETTS IS A PERFECT MICROCOSM THROUGH WHICH TO EXPLORE THE INFLUENCE OF INDEPENDENT VOTERS. THE PERCEPTION OF MASSACHUSETTS AS A PREDOMINANTLY BLUE STATE IN WHICH DEMOCRATIC CANDIDATES DOMINATE IS MISLEADING. WHILE THIS IS TRUE OF THE LEGISLATURE, THE ELECTORATE OF THE BAY STATE IS OVER ONE-HALF INDEPENDENT, GIVING MASSACHUSETTS THE LARGEST PROPORTION OF INDEPENDENT VOTERS IN THE UNITED STATES. THIS PIECE EXPLORES HOW A PREDOMINANTLY INDEPENDENT CONSTITUENCY ELECTS A PREDOMINANTLY SINGLE-PARTY LEGISLATURE. USING REGISTRATION AND ELECTION DATA AS WELL AS FIRST-HAND ACCOUNTS FROM MASSACHUSETTS LEGISLATORS, THIS ARTICLE SEEKS TO UNCOVER HOW THE INDEPENDENT VOTER FITS INTO AMERICA'S DOMINANT TWO-PARTY SYSTEM. IN THIS PROCESS, IT CONFRONTS QUESTIONS ON THE MERIT OF THE TWO-PARTY SYSTEM AS WELL AS THE IDENTITY OF THE AMERICAN VOTER.

Independent voters are relevant in today's political world. They are constantly being analyzed in polls, sought after in political campaigns, and heavily scrutinized by the two-party system. Figure 1 shows just a few of the many recent articles and studies written about Independent voters and their influence on politics.^{1,2,3} Their growing popularity raises two important questions: are the numbers of Independent voters increasing, and if so, what is their influence on the Commonwealth?

Massachusetts is the frontrunner for Independent voters in America, with over 53% of its registered voters being Independent.⁴ Figure 2 shows how Massachusetts leads the top five states in which Independents exceed party membership. According to the most recent Gallup Poll, 42% of Americans nationwide identify themselves as In-

“For Independents, a Tough Road to November”
 Explores the political and financial challenges faced by the three independent candidates for governor in MA in 2014

“Charlie Baker Pushes for Independent Voters”
 Baker appeals to Independent voters for support and cites the large number of people who crossed party lines to support him.

“Percentage of Independent Voters Climbs in Mass”
 Details the latest jump in Massachusetts Independent Voters to over 52%

“Independents Exceed Party Registration in Key States”
 Massachusetts leads Top 5 states in proportion to Independent voter registration, including Alaska, Rhode Island, New Jersey, and Connecticut

FIGURE 1: RECENT HEADLINES ABOUT INDEPENDENT VOTERS IN MASSACHUSETTS.

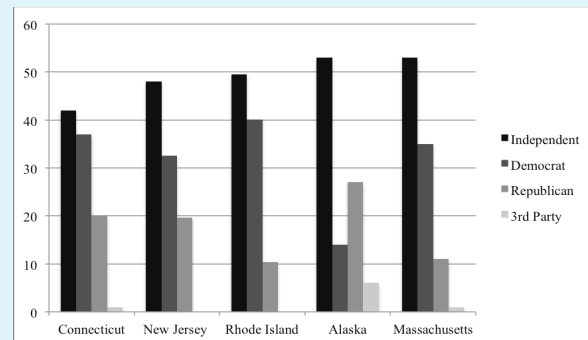


FIGURE 2: STATES WHERE INDEPENDENTS EXCEED PARTY MEMBERSHIP⁴

dependent voters, the highest proportion in history. The rate hovered between 20% and 32% in the years since 1988, and has started increasing steadily following 2004.⁵

What constitutes an Independent voter, according to the state of Massachusetts? *The Encyclopedia of Third Parties in America* defines Independent voters as “[t]hose who have registered to vote, but are not affiliated with a political party.”⁶ For example, Independent voters in Massachusetts are those who have registered to vote in the state, and have access to the benefits of being a registered voter; however, they have elected to remain free of a party designation.

What are the objectives of Independent voters? As Unenrollment is not an organized party, there is no singular answer to this question. The Massachusetts Coalition of Independent Voters believes in “making the political process more open and fair, and less partisan.”⁷ Independentvoting.org, along the same strand of ideology, states that Independent voters seek to “diminish the regressive influence of parties and partisanship by opening up the democratic process,” “support new models of nonpartisan governance,” and “strive for the broadest terms of ‘bottom-up’ participation”⁸

When a person registers to vote in Massachusetts, he or she has six party identification options. There are the two main parties, Democrat and Republican, as well as Massachusetts’ two major third parties, the Green Rainbow Party and United Independent Party. If these do not suit the voter, he or she can elect to be Unenrolled (Independent) or choose from Massachusetts’ 26 third parties, listed in Table 1.

Massachusetts has open primaries, so Independents can vote in primaries and pull whichever of the two main party

America First Party	Green Party USA	Natural Law Party	Prohibition Party	United Independent Party
American Independent Party	Green-Rainbow	New Alliance Party	Rainbow Coalition	Veterans Party America
American Term Limits	Interdependent 3 rd Party	New World Council	Reform Party Socialist	We the People
Conservative Party	Libertarian	Pirate	Twelve Visions Party	Working Families
Constitution Party	Massachusetts Independent Party	Pizza Party	Timesizing Not Downsizing	World Citizens Party

TABLE 1: ALTERNATE LEGAL POLITICAL DESIGNATIONS IN MASSACHUSETTS ⁹

ballots they want. Voters enrolled in any of the alternate political designations, however, cannot vote in primaries. Primaries in Massachusetts are restricted to registered Democrat, Republican, and Unenrolled voters. Democrats and Republicans must pull their respective party's ballot, but Independents can pull either.

In bold are the most popular parties by enrollment. The Green Rainbow Party, for example, is one of the more common third parties. It has over 6,500 registrants in Massachusetts, or about 0.1% of the Commonwealth's registered voters. The Pizza Party, though it sounds fictitious, garnered enough signatures to be recognized as a legal third party in the state of Massachusetts, but only has one member.

THE PREVALENCE OF INDEPENDENT VOTERS IN MASSACHUSETTS

The percentage of Independent voters in Massachusetts has increased during every presidential administration since that of Dwight D. Eisenhower in 1953-1961. The only exception is Ronald Reagan's presidency, which saw a 0.056% decrease in Independent registration, though the general number of total registered voters decreased during this time.¹⁰

Figure 3 shows registered voter enrollment in Massachusetts from 1948-2012.¹¹ Unenrolled voters have always been larger in number than Republicans since 1948, and they surpassed even Democratic enrollment in 1990. 50 years ago, Unenrollment was 35.72% in Massachusetts, and it has since increased steadily to over 53% today.¹²

Independent voter registration has shown a strongly consistent linear increase over the past ten years. As Figure 4

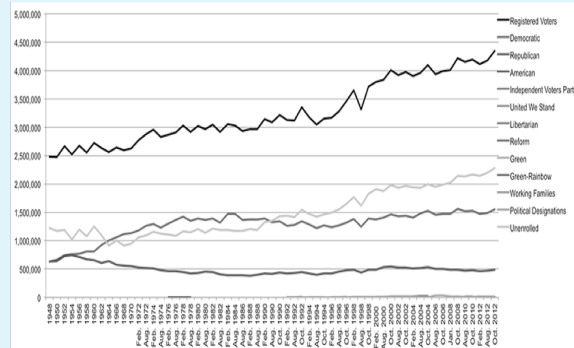


FIGURE 3: MASSACHUSETTS REGISTERED VOTER ENROLLMENT, 1948-2012

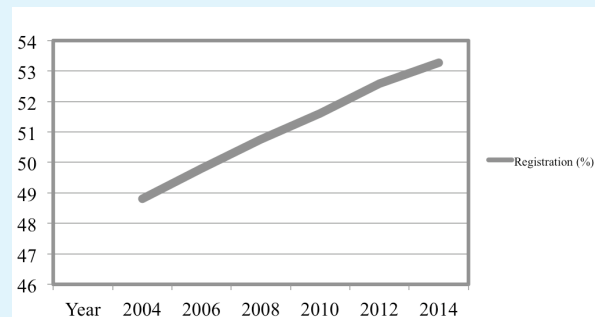


FIGURE 4: INDEPENDENT VOTER REGISTRATION AS A PERCENTAGE OF TOTAL ENROLLMENT, 2004-2014

shows, Unenrollment has increased every single year of this past decade, from 48.80% in 2004 to 53.27% today. This 4.47% increase is a significant political trend.

Today, Massachusetts boasts over 2.2 million Independent voters, an increase of almost 300,000 in the past decade alone.¹³ This is akin to half the population of Boston becoming Independent. Both in Massachusetts and the United States as a whole, the shift has come at more of a cost to Republicans. Massachusetts Democrats lost about 3% of their supporters, while Republicans lost almost 15%.¹⁴

HOW DEMOCRATIC OR REPUBLICAN IS MY TOWN?

Massachusetts may seem like a one-dimensional state in the realm of party affiliation, but the individual affiliation of each municipality tells a different story. Of the 351 towns in Massachusetts, 186 lean Democrat, and 165 lean Republican.¹⁵ Massachusetts is not strictly a "blue" state. It is worth noting, however, that the range of Democrat-leaning

and Republican-leaning towns is skewed. Massachusetts's uniquely Democratic identity is maintained by the large gap between the most heavily leaning Democrat and Republican towns. In the most Democratic town, Provincetown, Democratic candidates receive 73% more votes on average, whereas Republican candidates in the most Republican town, Lynnfield, receive only 28% more of the vote on average. It is significant to note that these statistics come from election returns, not registration data. Even

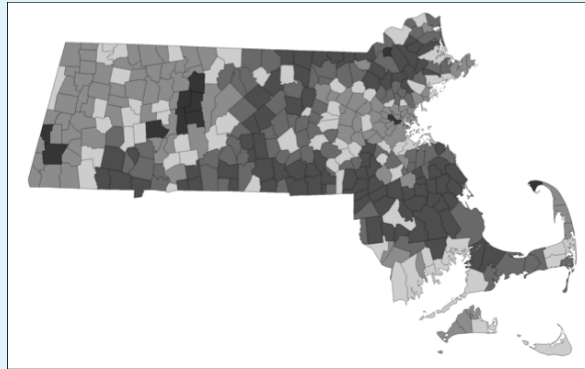


FIGURE 5: THE MOST DEMOCRATIC TOWNS, BY ELECTION RESULTS, IN MASSACHUSETTS ARE PROVINCETOWN, CAMBRIDGE, AND AMHERST. THE MOST REPUBLICAN ARE LYNNFIELD, BOXFORD, AND HANOVER.

though certain towns consistently vote for Republican candidates, there are no municipalities in Massachusetts with a majority of Republican voters.¹⁶

Municipalities with the most evenly balanced votes (less than 0.15% gap between votes for the Democratic candidate and Republican candidate) are: Ayer, Shrewsbury, Groton, and Southamptn.¹⁷ It is also interesting to note the regional trends of party support. The Greater Boston Area, as well as Western Massachusetts, is largely Democratic, surrounded by large areas of Republican support in Central and Southeastern Massachusetts.

When it comes to electing the Massachusetts legislature, the political identity of the Commonwealth remains stubbornly one-sided. The current composition of Massachusetts legislators elected to the United States Congress is 100% Democrat US Senators Ed Markey and Elizabeth Warren are both Democrats, as is each representative from Massachusetts' nine congressional districts. Massachusetts' state-level government has slightly more Republican representation: the Senate is 85% Democrat (34 Demo-

crats to 6 Republicans), and the House of Representatives is 78.5% Democrat (125 Democrats to 35 Republicans).¹⁸

The Massachusetts legislature has a history of Democratic predominance. The 85% Democrat's presence in the Senate is a decrease from previous years, when Democrats traditionally held an even larger portion of the Senate. Massachusetts Republicans, on the other hand, have not won a seat in the US House since 1994. There are currently no Independent legislators representing Massachusetts in the state-level House and Senate or in the US Congress.¹⁹

REASONS FOR BEING INDEPENDENT

A 2007 study examined the ideologies of Independent voters and characterized them into five categories. Their titles and respective distributions are shown in Table 2. Disguised Partisans are voters whose ideologies align with a single party, but elect to remain free of a partisan designation. Along with Disengaged Independents, who characterize themselves as more apathetic voters, Disguised Partisans account for 48% of Independent voters. Dislocated Independents, who make up 16% of the Independent population, are those whose ideologies straddle the two-party divide. The remaining 36% of Independent voters are comprised of the Disillusioned, or "angry" voters, and the Deliberators—voters who like to begin from square one when determining for whom to cast their vote.²⁰

Independent voters have the lowest rate of election participation. They continually underperform registered Democrats and Republicans at the voting booth by 20%.²¹ This supports the categorization of a large portion of Independent voters as disillusioned or disengaged. Such voters have little incentive to make their voice heard at the

1. Disguised Partisans	48%
2. Disengaged	
3. Dislocated	16%
4. Deliberators	36%
5. Disillusioned	

TABLE 2: IDEOLOGIES OF INDEPENDENT VOTERS²⁰

ballot box.

INDEPENDENTS IN THE 2014 MASSACHUSETTS GENERAL ELECTION AND NOTEWORTHY INDEPENDENT CAMPAIGNS

In the most recent general election in Massachusetts, there were five candidates in the race for governor. Now-Governor Charlie Baker, a Republican, and Martha Coakley, a Democrat, led the race. They were joined by three Independent candidates, Evan Falchuk, Scott Lively, and Jeff McCormick, who together garnered over 100,000 votes, or almost 5% of total votes cast.²²

Figure 6 shows all Independent and third party candidates who ran in the 2014 Massachusetts general election.²³ It may be easy to think of an Independent candidacy as a rare occurrence, but the vast number of such political hopefuls in 2014 proves otherwise. The names in bold are those candidates who garnered more than 20% of the vote in their race. Suzanne T. Seguin, whose name is italicized, won her race for Register of Probate of Hampden County as an Independent.

Analyzing these candidates and their corresponding offices shows evidence that Independent and third party bids for political office are more successful on two spectrums. One is in less politicized positions, like the Executive Councilor and Register of Probate. These are positions that function within the political sphere, but do not include overt party alliances or voting that could prove ideologically divisive. Second, Independents have a greater opportunity to flourish by running for smaller, more local titles. Because of the smaller constituency, Independents, who often have limited funds and rely instead on personal connections and name recognition, can more easily appeal directly and personally to their constituents about why they should be elected. As stated in the goals set out by independentvoting.org, the concept of “bottom-up” politics is instrumental to Independent voters and candidates.²⁴ Major-party candidates enjoy more support from the party structure and can therefore launch more traditional, successful campaigns across a larger cross-section of Massachusetts.

However, there have been several successful Independent candidates in higher offices throughout the history of the Commonwealth. In 1972, John Joseph Moakley, for whom the district courthouse is named, won his seat

in Congress representing the 9th Congressional District, and later declared himself a Democrat. In 1988 David Hudson won a seat in the US House representing the 5th Congressional District. In the Massachusetts State House,

Governor and Lieutenant Governor

Falchuk and Jennings (UIP)

Lively and Saunders (Ind)

McCormick and Post (Ind)

Secretary of State

Daniel L. Factor (GR)

Treasurer

Ian T. Jackson (GR)

Auditor

MK Merelice (GR)

Representative in Congress

Christopher J. Stockwell (Ind)

Executive Councillors

Thomas Sheff (Ind)

Joseph M. Crosby (Ind)

Joe Ureneck (WFP)

MA Senator

Mike Franco (Am. 1st)

Heather M. Mullins (Lib)

Robert E. Powers

MA Representative

Ari B. Herzog (Ind)

Steven J. Stanganelli (Ind)

Joseph L. Valianti (Ind)

Daniel J. Morris (Lib)

William Lantigua (Unen.)

Robert J. Underwood (Unen.)

Arleen M. Martino (Unen.)

Kristine E. Coffey-Donahue (Ind)

Michael John-Coombes (Liberty)

Sharon K. Antia (Ind)

Kenneth William Van Tassel (Lib)

Fred W. Bahou (Unen.)

Thomas Michael Vasconcelos (Ind)

Noelani Kamelamela (Pir)

John P. Matheson (Ind)

Tyler Jay Prescott (Unen.)

Celeste B. Ribeiro Myers (Unen.)

Joseph F. Guertin (Pir)

Register of Probate- Hampden County

Suzanne T. Seguin (Ind)

Sheriff of Suffolk County

Hassan A. Smith (Ind)

FIGURE 6: INDEPENDENT AND THIRD PARTY CANDIDATES IN THE 2014 ELECTION

“Independent candidates face many barriers to election, one being the lack of party support and financing during campaigns, and another being the disadvantageous redistricting that puts one party clearly in the majority.”

there have been 22 Independents who won election to the House of Representatives, many of whom declared party affiliation soon after. In the 2012 race for representative for the 24th Middlesex District, Independent Candidate James Gammill received more of the popular vote than the Republican challenger. Lastly, in the 2010 race for the Massachusetts House, all candidates for the 8th Bristol district were Independent.²⁵

One of the most notable nation-wide Independent campaigns was led by Ross Perot in the 1992 Presidential Election. Perot waged an aggressive campaign and won 18.91% of the general election votes.²⁶ Some political analysts herald Perot’s run as proof that Independents are viable candidates who can successfully challenge the two-party system and appeal to a significant amount of voters. Others say that Perot’s success is not a success for the Independent name. Perot, a successful businessman from Texas, contributed 90% of his own campaign funds.²⁷ He did not need the financial support of a major party because he could supply it on his own. To these people, Perot was more of the same—a wealthy politician whose success stemmed not from the quality of his ideals, but from his ability to buy publicity.

LEGISLATIVE OUTLOOK

When asked about how they approach and engage their Independent constituents, Massachusetts legislators share varied responses.²⁸ One Republican representative espouses benevolent indifference toward Independent voters in his district. This legislator believes that Independent voters are not significant to him specifically, because his duty as a public servant is to represent all of his constituents. He acknowledges that a vast majority of his district is Independent, and he feels that they vote “person, not party” and that they value bipartisanship.

The same representative also believes that Independent candidates will not find success in the Massachusetts State

House. He notes that both Independent candidates who have won in the recent past, Representatives Paul McMurry and Tom Sannicandro, declared party affiliation (Democrat) soon after coming to office. Many legislators shared in this profound doubt that the rise in Independent voters would allow Independent politicians to become more successful in the future. Independent candidates face many barriers to election, one being the lack of party support and financing during campaigns, and another being the disadvantageous redistricting that puts one party clearly in the majority. Partisan candidates have access to a large and well-funded support base; they can more easily fund publicity and get-out-the-vote media, as well as count on the support of their party’s leadership. Legislators noted that Independent candidates do best in local elections where they can more easily rely on grassroots campaign tactics and face-to-face publicity.

One representative conjectures that a possible solution to the barriers faced by Independent candidates is an election reform law providing Independent candidates with proper funding. Other legislators acknowledge that they believe the presence of Independent officials in the legislature would be beneficial to the policy process, but again cite redistricting and financial deficits as obstacles. One Democratic senator is adamant that voters do not have time to invest their support in non-party candidates, and one Democratic congressman notes the rise of “hyperpartisanship.” Interestingly, both of these legislators say they take moderate policy stances and do not always vote with their party leadership.

Furthermore, it can be difficult for politicians to target Independent voters because there is not a single set of issues with which all Independent voters identify. The Congressman notes that the House Ethics Committee prohibits members of Congress from reaching out to voters based on party identity.

In the aggregate, all legislators who were interviewed

expressed the sentiment that Independent politicians would not become more successful in the future because they face too many barriers, namely lack of financing, partisan control of redistricting, and their status as newcomers. These often prove to be insurmountable during campaigns.

CONCLUSION

It is clear that the prevalence of Independent voters is growing. Massachusetts is at the national forefront of Independent voter enrollment, and its Independent voters have been increasing steadily over the past 50 years. There are many reasons for registering Unenrolled, and there continue to be diverse regions of party affiliation throughout the Commonwealth. Though legislators remain skeptical about the viability of Independent politicians winning office, there have been several Independent victors throughout Massachusetts history, and there was a strong showing of Independent candidates in the 2014 Massachusetts General Election.

An increasingly Independent electorate, however, is not a harbinger of an increasingly Independent legislature, and Massachusetts remains a rigidly “blue” state. The overwhelmingly Democratic composition of the Massachusetts legislature at the state and national level cannot be ignored. It is also important to reiterate that the influx of Independent voters is coming primarily from those who would have otherwise registered Republican.

The success of Independent candidates remains dim and ambiguous at best. Whereas Independence provides ideological freedom for voters, it imposes restrictions on legislators. It is less consequential to remain free of party affiliation as a voter than as a legislator, where the latter can impede a politician’s ability to promote policy, engage in negotiation, and garner electoral support. Reasons for being an Independent voter vary, and the nature of Unenrollment is not conducive to producing a united coalition of Independent voters that can rally behind a political campaign.

It is undeniable that the composition of the Massachusetts electorate is shifting, and Independents contribute to a significant part of this trend. It remains to be seen how this affects the Commonwealth as a whole. Optimistically, this shift proves the resiliency of the American political system. Though many voters are disillusioned or feel unrepresented by the party system, the increase in Independent

voters shows that citizens take seriously their civic duty. Instead of not registering to vote, Independent voters channel their ideologies into participation that transcends partisan affiliation.

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INHERITED INJUSTICE

Stigma and Gender Discrimination as Barriers to AIDS Prevention in India

CATHERINE LARRABEE

OVER THE PAST DECADE, PROGRAMS THAT PREVENT THE VERTICAL TRANSMISSION OF HIV FROM PARENTS TO THEIR CHILDREN HAVE BECOME WIDELY ACCESSIBLE IN INDIA. DESPITE THIS OSTENSIBLE SUCCESS, MOST INDIAN WOMEN AND THEIR UNBORN BABIES DO NOT UTILIZE THESE PROGRAMS, AND THEREFORE REMAIN VULNERABLE TO VERTICAL TRANSMISSION. THIS ARTICLE EXPLORES THIS TROUBLING PHENOMENON BY HIGHLIGHTING THE PARTICULAR EFFECT OF HIV/AIDS-RELATED STIGMA ON WOMEN WHO LIVE IN HIGHLY PATRIARCHAL SOCIETIES. IN THESE CONTEXTS, THE EFFECTS OF STIGMA BECOME TANGIBLE RATHER THAN SIMPLY EMOTIONAL. WHEN STIGMA EXISTS ALONGSIDE GENDER INEQUALITY, THESE FORCES COLLUDE AND BECOME A STRUCTURAL BARRIER THAT KEEPS WOMEN FROM SAFELY OBTAINING THE TREATMENT TO PREVENT VERTICAL TRANSMISSION. THIS PROBLEM IS DOUBLE-PRONGED AS NEGATIVE ATTITUDES FROM HEALTH CARE STAFF CREATE PREJUDICE AND PROMPT PATIENTS TO KEEP THEIR HEALTH STATUS A SECRET OUT OF FEAR OF JUDGEMENT. ATTENDING TO ISSUES OF STIGMA AND GENDER INJUSTICE IS A NECESSARY STEP IN THE MISSION OF HOLISTICALLY ADDRESSING THE CRISIS OF HIV/AIDS IN INDIA AS WELL AS THE GLOBAL COMMUNITY.

INTRODUCTION

Every year, 49,000 women living with HIV in India become pregnant and give birth.¹ These women are at a high risk of transmitting HIV to their babies while pregnant, during delivery, or through breastfeeding. Their difficulties are compounded by the intense social stigmatization that they experience throughout their pregnancies, especially if they openly seek treatment in hopes of preventing transmission to their children. Given how little agency women possess in the context of a patriarchal society, addressing the issues surrounding HIV-positive pregnancies is an urgent ethical and public health concern.

The situation of a pregnant woman who is HIV-positive presents a unique opportunity in which a potential transmission can be immediately foreseen and prevented. Despite this occasion, UNAIDS maintains “there are currently few interventions being implemented to help women to remain HIV-free during pregnancy, breastfeeding and beyond. More effort is needed to address this gap.”² As a result, HIV is still the leading cause of death among women of reproductive age.³ Vertical transmission, the transmission of HIV from mother to child, is the largest source of HIV in children.⁴ Socioeconomic disadvantages can fur-



BAIGA WOMAN AND CHILD IN INDIA (COURTESY OF WIKIMEDIA COMMONS)

ther increase transmission risks, as “Women in the poorest quintile are two to three times less likely than those in the richest households to have access to or to use these vital interventions.”⁵

As the Gap Report suggests, the quantitative lack of prevention of parent to child transmission (PPTCT) programs is one factor that limits access to care. However, the solution transcends simply creating more services. Powerful cultural factors often preclude women from utilizing the programs that already are in place, and India is a society in which these cultural barriers are in full force. The case above is the introduction to a thorough study of the experience of HIV-positive women and their interaction with and attitudes toward PPTCT programs in the South Indian state of Tamil Nadu. This case begins to illuminate the underlying cultural issues that prevent women from accessing PPTCT services. These social factors are symptomatic of an underlying problem that keeps women from utilizing PPTCT programs and predisposes them to HIV in the first place: the marginalization of women in patriarchal cultures.

PPTCT PROGRAMS AND THEIR LIMITS

In response to the problem of parent to child transmission, the most common solution has been the implementation of PPTCT programs. Though these programs have proven to reduce transmission rates when utilized, societal stigma often limits their efficacy.

Around the world, wherever PPTCT programs exist and are utilized, they have been instrumental in reducing the rate of HIV transmission from mother to child (vertical transmission). In fact, effective PPTCT interventions reduce the risk of vertical transmission from 33% to 3%.⁶ These programs have had a positive global effect. According to the UNAIDS Gap Report, “The rate of mother-to-child transmission [has fallen]—16% of children born to women living with HIV became infected compared to 25.8% in 2009.”⁷

Consistent with this global trend, the PPTCT program implemented by the government of India has met many of its goals.⁸ By 2008, “4.61 million pregnant women were counseled and tested for HIV during their prenatal care in government maternity hospitals; 21,483 pregnant women were found to be HIV-positive; and 10,494 mother-baby pairs were given a single dose of nevirapine.”⁹ However, these promising figures hide the difficulties inherent in

“Despite the successes of PPTCT, the majority of HIV-positive pregnant women in India remain vulnerable to vertical transmission.”

ensuring access to PPTCT programs. As Cecilia Van Hollen notes, “While the government of India has made progress increasing the availability of prevention of mother-to-child transmission of HIV services, only about one quarter of pregnant women received an HIV test in 2010, and about one-in-five that were found positive for HIV received interventions to prevent vertical transmission of HIV”.¹⁰ Despite the successes of PPTCT, the majority of HIV-positive pregnant women in India remain vulnerable to vertical transmission.

In her case study, Van Hollen indicates that this gap could be caused by underlying cultural factors that stigmatize women with HIV/AIDS and therefore deter pregnant women from seeking treatment. When women publicly disclose their HIV status by participating in PPTCT, they face discrimination throughout their pregnancy and birth by the community, family members, and healthcare workers. This experience of stigmatization can be extremely isolating, and detracts from what little agency these women had to begin with. For this reason, pregnant women in India who fear discrimination might be less likely to seek out PPTCT programs and undergo HIV testing, therefore risking their own health, the health of their unborn child, and the health of the community. In light of these high stakes, it is necessary to examine the societal factors that facilitate such a decision.

Firstly, participation in PPTCT programs implies a risk of revealing one’s HIV-positive status to the community, and therefore a resulting risk of societal stigmatization and isolation. In many communities, those with HIV are labeled as “harijan or dalit (“untouchable” in the context of the historical Indian caste system).”¹¹ In the words of a nineteen-year-old Indian mother, “I do not think it is advisable for the people infected with HIV/AIDS to tell others about their [HIV] status because if they do so they will be treated as untouchables. They will not be allowed to mingle with other people . . . They will not be allowed to speak to others. The food they prepare will not be touched by anybody; nor will they [community] give them food. They will not be allowed to touch others, sit with others, etc.”¹² This moth-

er’s advice stems from a concern for social flourishing and material wellbeing. A mother considering how she and her future child will fit into and thrive within the community will likely be deterred by the emotional and material detriment that could ensue if her HIV status becomes public. Therefore, fears of community stigmatization become a legitimate factor that hinders women from pursuing the PPTCT services they need.

PPTCT participation can also risk disclosure of women’s HIV status to her relatives, from whom HIV-positive women often experience blame and rejection. Due to the intensely patriarchal kinship models common in India, females are already alienated within the context of the family. Van Hollen notes that an unintended effect of India’s PPTCT programs leads women to be diagnosed as HIV-positive before their husbands, which “can have negative repercussions on the status of women within the extended patrilineal, patrilineal family structure, because women are accused of being promiscuous and are blamed for bringing HIV/AIDS into the family, thereby exacerbating pre-existing gender inequalities.”¹³ As a result, the husband’s family may throw the wife out of the house and refuse to care for either her or her children.¹⁴ For an HIV-positive woman responsible for HIV-positive children in the context of a highly patriarchal society, this could be a death sentence. The potential consequences of a mother’s relatives discovering her HIV status are often enough to deter her from risking participation in a PPTCT program, even in light of the potential long-term benefits it could bring.

Lastly, women fear discrimination and maltreatment from healthcare workers when they opt for obstetric care through a PPTCT program as openly HIV-positive. Medical employees that perform PPTCT services are often influenced by the same cultural stigmas about HIV that inform Indian society as a whole. These prejudices are manifested in the report that “HIV-positive mothers had experienced refusal for treatment, abusive behavior, moral judgment and lack confidentiality by health staff.”¹⁵ One woman reports, “During the delivery, there were two nurses and they did not even touch me during delivery even

when I was suffering from pain . . . Even when I was bleeding they did not come to my help. They scolded my grandmother to wipe the blood, and they even did not touch my child.”¹⁶ In addition to being emotionally traumatizing and physically painful, this lack of intervention drastically increases the likelihood of poor quality of obstetric care and complications during childbirth. Additionally, discrimination by health workers increases the chances of vertical HIV transmission, the very event PPTCT care is supposed to prevent. If this is the quality of care women risk when opting into PPTCT programs, it should come as no surprise when they decide to avoid the effects of discrimination and avoid HIV-specific services.

These potentially deadly consequences associated with disclosing one’s HIV status deter pregnant women from seeking the resources they need to prevent vertical transmission. These examples indicate that the significance of stigma transcends the emotional realm. Rather, the effects of societal stigma have concrete effects upon women known to be HIV-positive: they are rejected by their communities, cast out from their families, and discriminated against by health workers. These consequences disproportionately affect females in patriarchal communities, where women are already disenfranchised. In the words of an HIV-positive mother in Tamil Nadu, “Society is more unkind to HIV-positive women.”¹⁷

Understandably, women fear HIV-related stigma and try to avoid the risk PPTCTs pose to the confidentiality of their HIV status. Given the patriarchal society in which women are already relegated to the margins, women rationally choose to avoid jeopardizing what little agency they have to begin with. However, public health consequences of this phenomenon are too dire to ignore. Therefore, the barriers women face in accessing PPTCT programs must be examined and addressed at the cultural level.

STRUCTURAL BARRIERS TO PPTCT ACCESS

The barriers women face in accessing PPTCT programs illuminate the underlying cultural dynamics that prevent them from experiencing safe pregnancies, delivering healthy babies, and ultimately thriving as individuals. The realities of female life in India persist, regardless of what services are currently available to pregnant women. Therefore, in order to truly prevent the transmission of HIV from mother to child, we must recognize the manifestations of structural violence in India that devalue and diminish the female experience.

In order to effectively decrease the vertical transmission of HIV, we must first reconsider what factors put women at risk for contracting the virus in the first place. Though married women are not typically considered a high-risk group by those working to combat AIDS in India, “a substantial proportion of new HIV infections are occurring among stable heterosexual couples.”¹⁸ This observation should serve as a red flag. It indicates that risk is correlated with a standard, “stable” element of the female experience in India, rather than deviation from social norms. Furthermore, a study of pregnant women in western India suggests the following:

“[A woman’s] HIV risk perception seems more influenced by her socio-demographic status and her couple relationship than by her level of HIV-related knowledge... the significant factors identified in this study point out to the fact that risk perception and hence risk reduction among pregnant women, and probably overall women within stable heterosexual couples, must go far beyond imparting knowledge about HIV and must address the more deep-rooted issues such as partner communication, domestic violence, alcoholism, and lack of education among women.”¹⁹

Therefore, the factors that predispose women to HIV vulnerability are the same ones that decrease their quality of life, social status, and perceived value in society. Unsurprisingly, these are also the effects of second-class citizen-



A WOMAN WELCOMING A FEMALE PATIENT AT A HEALTH CLINIC IN INDIA. SMALLER ILLUSTRATIONS DEMONSTRATE THE WAYS IN WHICH AIDS CAN BE TRANSMITTED. (COURTESY OF WIKIMEDIA COMMONS)

ship in a patriarchal society. Therefore, working towards the general empowerment of women within Indian communities will simultaneously work to prevent the spread of HIV/AIDS.

Progress in women's empowerment will increase female agency in all areas of life, including the ability to pursue PPTCT services without fear of stigma and its effects. As demonstrated above, a substantial barrier to women's PPTCT access is their fear of the devastating consequences that follow from beings labeled as HIV-positive. The devastation of these consequences is not inherent, but results from the relative lack of agency females in Indian society have to cope with them. As Gillian Paterson reminds us, "It is the way we relate to each other that creates the conditions for transmission. We are actively welcoming AIDS when a person's identity is defined in terms of how successful an adjunct she or he is to wishes of family and culture."²⁰ In light of this wisdom, it becomes clear that in order to decrease HIV transmission rates and increase access to PPTCT programs, we must adjust our definition of female identity and work to empower women in all aspects of life.

MOVING FORWARD: CATHOLIC DUTIES

The obstacles faced by pregnant women with HIV in India reveal the extent to which women struggle with discrimination, marginalization, and a lack of agency in their everyday lives. Unfortunately, the availability of PPTCT programs cannot serve as a comprehensive solution for the issue at its root, no matter how effective they may be. As long as gender inequality exists, women will be systemically vulnerable insofar as acquiring HIV and transmitting the virus to their children. To ameliorate the issue in the long term, it is necessary to diminish the stigmatization of HIV and to promote gender justice.

Stigma and the status quo are powerful forces, but we are called as a global church to overcome them in hopes of bringing about justice. The first step is radical inclusion. Gillian Paterson reminds us that "the focus on stigma calls us to take a new look at the theological meaning of community ... An HIV-friendly church is not just one where people with HIV are welcome: it is one where those who are most vulnerable to transmission (often rejected by 'the world') are also welcome."²¹ Christopher Vogt notes how the Gospels' "insistence that there be no limit upon who is to be considered a "neighbor" and [Jesus's] example of repeatedly attempting to build bridges

between marginalized persons and the rest of the community"²² challenge the Church to stand up to stigma and social injustice. Jesus healed the leper not for the sake of public health, but to relocate him from social isolation back into the community.

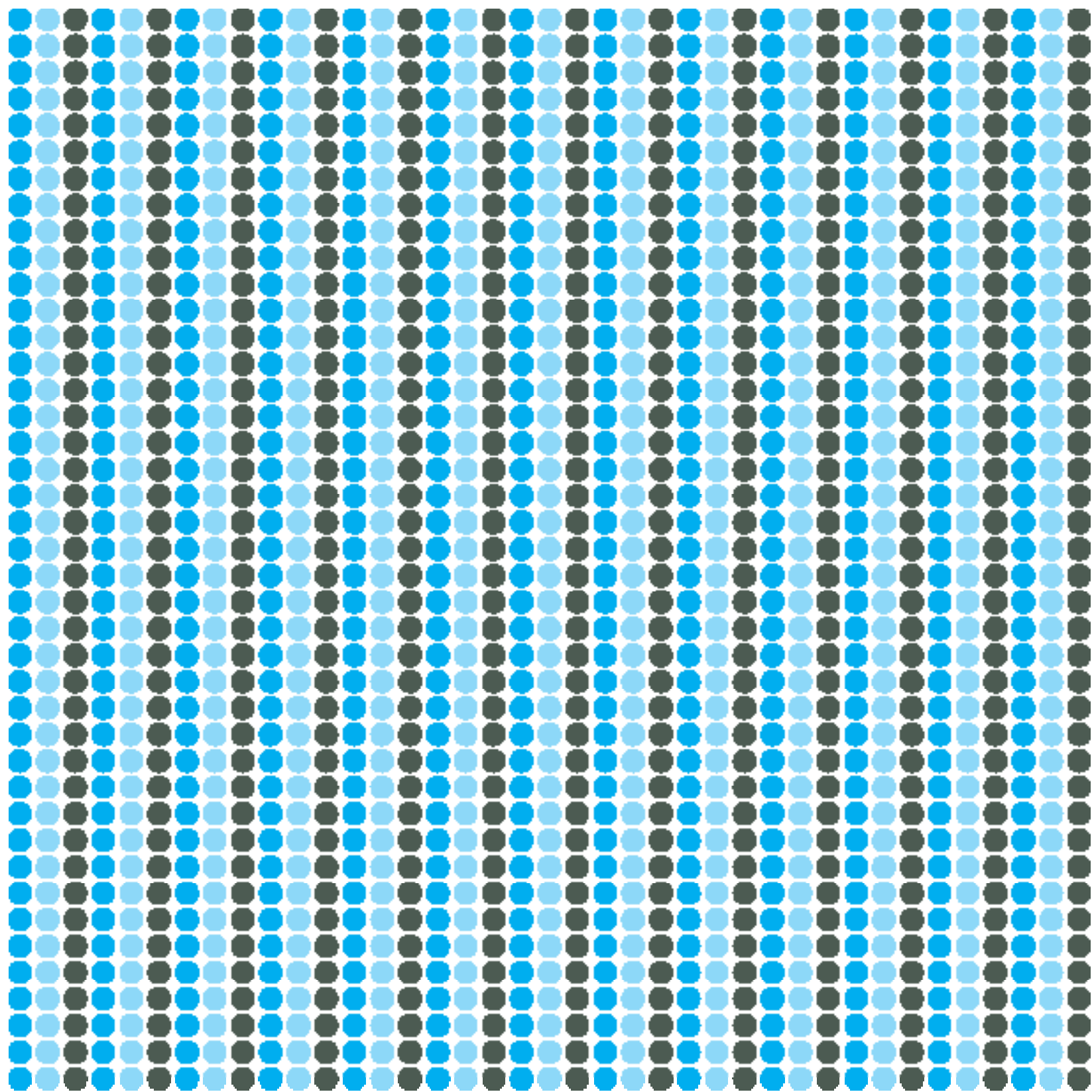
We must accept the challenge of the Gospel by working to eliminate oppressive and isolating conditions on earth, including HIV/AIDS. We must also accept the challenge by making an option for those who are most condemned by society, including pregnant, HIV-positive women in India. As the hands and feet of God on earth, we must take seriously the dignity of each human person by actively and radically relocating all isolated individuals into our communities. The more we accomplish this task, the closer the world will come to eliminating the risk of HIV/AIDS for all its people.

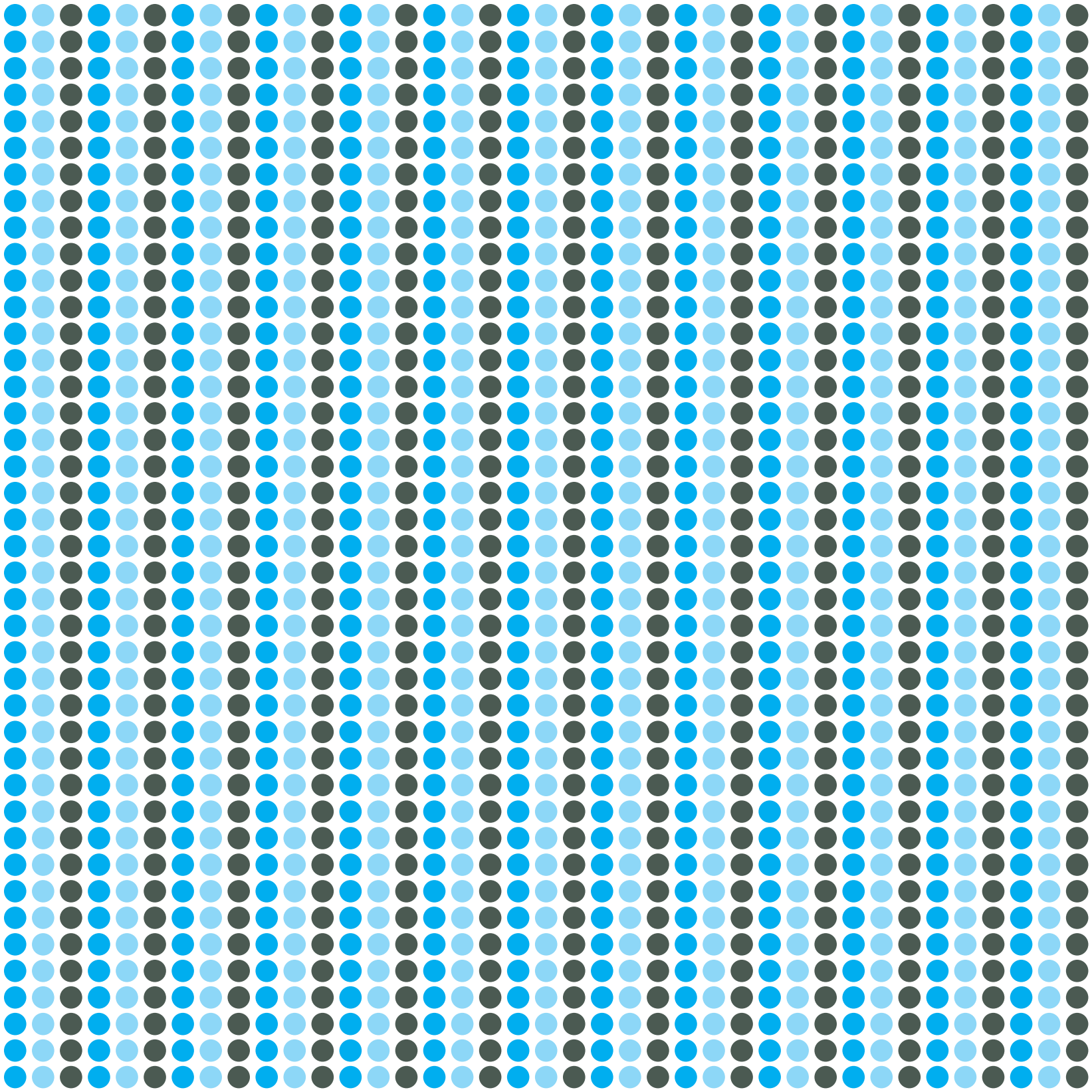
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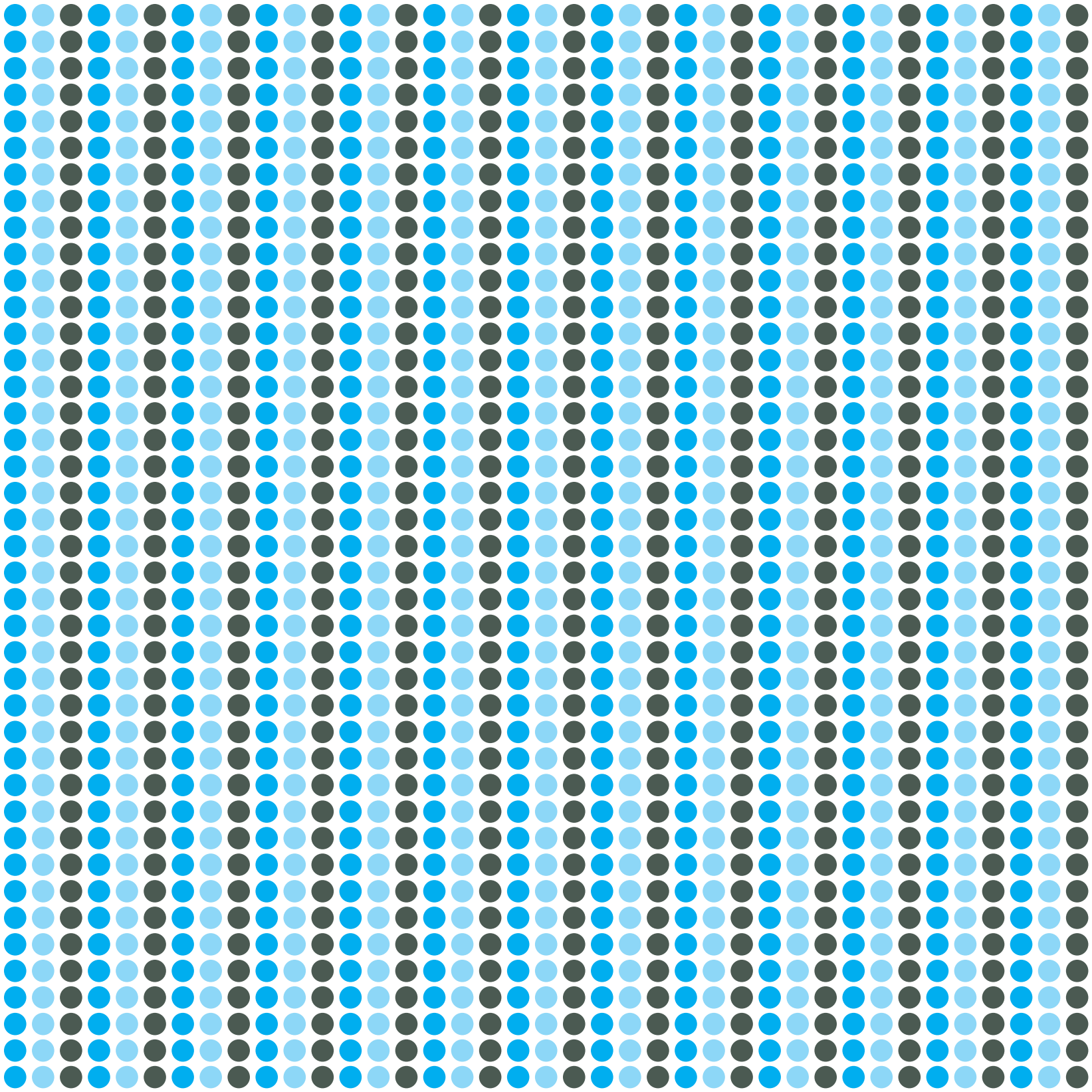
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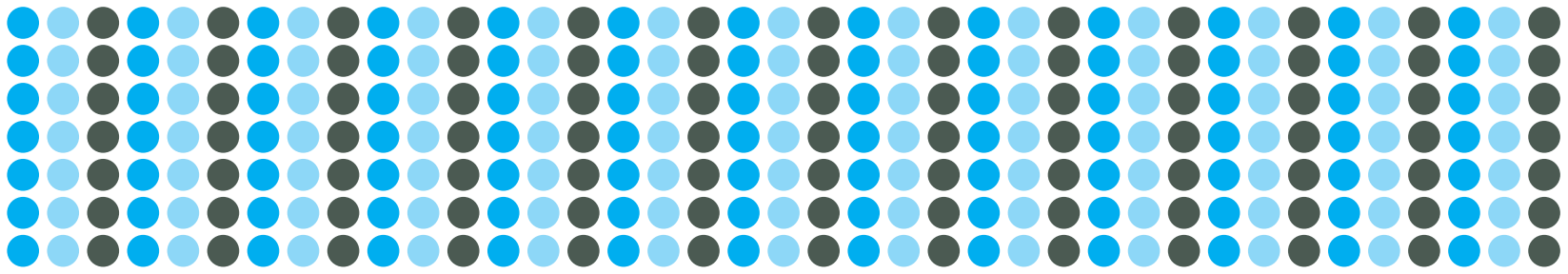
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is a senior majoring in Linguistics and French in the Morrissey College of Arts and Sciences Honors program. He has also studied at Boston University's Editorial Institute. His interests involve the history of linguistics, French missionary linguistics, and literary linguistics. Investigation into the ways linguistic approaches to text can inform text-critical, interpretive, and editorial decisions continues to be a focus in his work. Doyle works as a Undergraduate Research Fellow for Dr. Margaret Thomas. For his senior thesis research project, he will focus on a set of French missionary grammars from the late 19th and early 20th centuries.



EVAN GOLDSTEIN

graduated from Boston College *cum laude* with a B.A. in Theology and a minor in Philosophy. This fall, he begins an M.A. in Theology and Ethics at Union Theological Seminary, and hopes to pursue doctoral studies in the future. His research interests include questions of identity, such as race, gender, and sexuality, in theology, political theology, and re-evaluating Jewish and Christian traditions in light of developments in critical philosophical theories.



CATHERINE LARRABEE

is a senior in the Morrissey College of Arts & Sciences. She is majoring in Theology and minoring in Medical Humanities. On campus, she is involved with the Gabelli Presidential Scholars Program, the Women's Center, and the Arrupe International Immersion Program. She has spent her summers working at Haley House, studying Spanish in Costa Rica, and interning at *Commonweal* magazine. She is interested in social justice issues such as religion, gender, migration, and poverty, and hopes to continue studying these subjects in the future.



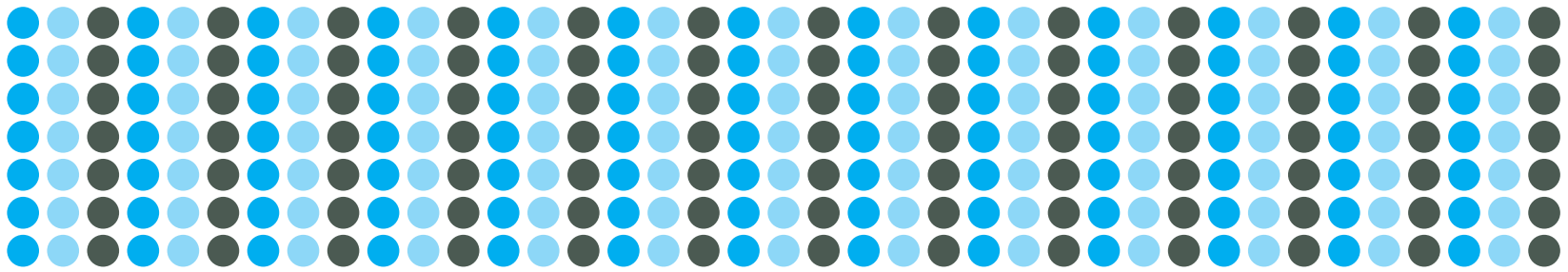
OLIVIA MCCAFFREY

is a junior in the Morrissey College of Arts and Sciences majoring in International Studies and minoring in French. She received an Advanced Study Grant to examine the prevalence of Independent voters in Massachusetts, which is the topic of her article in this issue. She has completed an internship at the Massachusetts State House and worked in the Library of Congress. Olivia spent the summer of 2015 studying Modernism in Paris. She plays for the Boston College Symphony Orchestra and has worked with high school students as a presenter for International Outreach and a teacher for the BC Splash program.



ALLISON SCHNEIDER

is a senior in the Morrissey College of Arts & Sciences majoring in Economics. She plans to continue in the Carroll School of Management after receiving her undergraduate studies to earn an M.B.A. with a concentration in finance. Outside of her coursework in economics, Allison has concentrated her efforts in the area of social justice and has been active in BC's service learning PULSE program. She also serves as the Treasurer for the Boston College chapter of Omicron Delta Epsilon, a national economics honor society.



BENJAMIN SHAPIRO

is a member of the Carroll School of Management Class of 2016, double majoring in Marketing and History. Born in Jamestown, New York, but raised in Indian Harbour Beach, Florida, Benjamin became an avid student of American Colonial and mercantile history after numerous childhood visits to the former Spanish settlement of St. Augustine, Florida, and the former whaling town of Nantucket, Massachusetts. In the near future, Benjamin hopes to finish his education at Boston College and then work in the creative realm of the marketing and advertising field as a Creative Producer or Ad Copywriter, and eventually return to school to obtain his M.B.A.



ALLYSON TANK

grew up in Long Valley, NJ. She studied Biology at Boston College, and was part of the Morrissey College of Arts and Sciences Honors Program as well as the Biology Department Honors Program. Through these programs, she had the opportunity to complete a senior thesis on her research project in Dr. Welkin Johnson's laboratory. Outside of her research, she also enjoyed volunteering at Brigham and Women's Hospital and Mt. Alvernia Elementary School. After graduation, she will be working for a year as a Patient Care Coordinator at a local dermatology practice and beginning her applications for medical school.



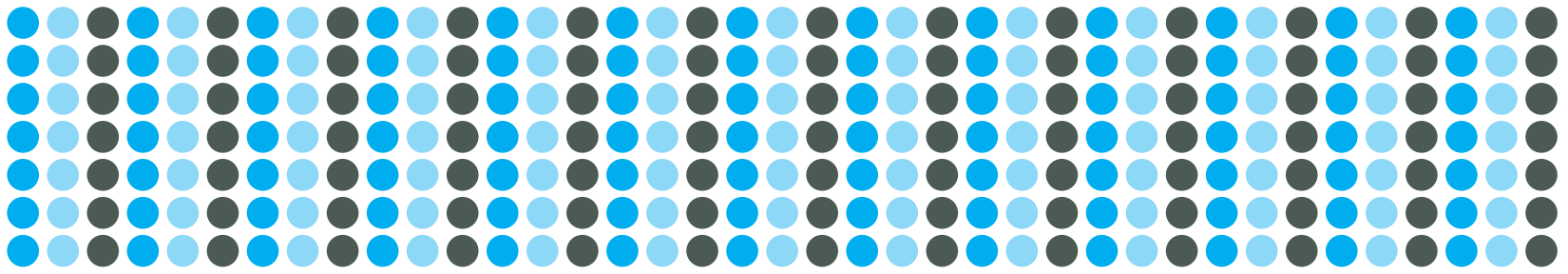
MARIA VAZQUEZ

was born in Miami, FL and moved to Quincy, MA when she was ten years old. Maria, a first-generation college student, attends the University of California at Santa Barbara pursuing a doctorate in counseling psychology. Her interests include identity development, the role of psychosocial stressors on mental health, and programs for low-income communities of color. At BC, she worked with the McNair and Community Research Programs, and completed research with professors in the Lynch School of Education. She was also an ERA Peer Advisor and Facilitator and the president of the Cuban-American Student Association.



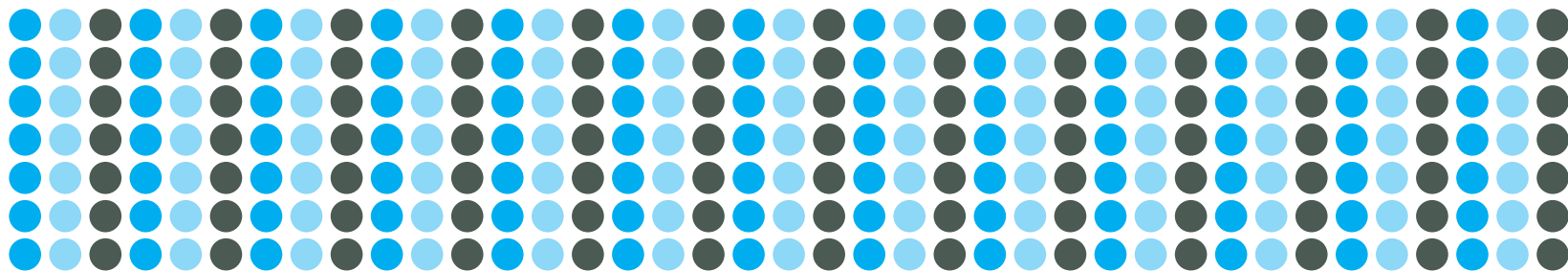
ALEC WALKER

is a senior from New London, New Hampshire. He studies History with a minor in German. He is particularly interested in German intellectual history as it relates to the conception and critique of human rights. After graduating in the spring of 2016, Alec hopes to take a year or two away from school in order to study and teach abroad. After this time off, he aspires to enter a Ph.D. program in History.



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