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Research Series on Technology and Human Trafficking

The Rise of Mobile and the Diffusion of Technology-Facilitated Trafficking

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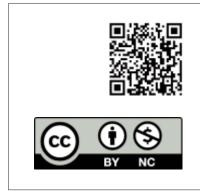
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EXECUTIVE SUMMARY

"We are turning the tables on the traffickers. Just as they are now using technology and the Internet to exploit their victims, we are going to harness technology to stop them."

> —President Barack Obama Address to the Clinton Global Initiative September 25, 2012

Tn September 2012, President Obama identified Lhuman trafficking as one of the great human rights issues of our time, representing a "debasement of our common humanity that tears at the social fabric of our communities, endangers public health, distorts markets, and fuels violence and organized crime."i The nature and extent of human trafficking in modern society is complex and evolving, however, and our understanding of the phenomenon is fraught with contested terminologies and differing perceptions. Broadly speaking, human trafficking involves the severe sexual and labor exploitation of vulnerable people for financial gain, which amounts to a gross violation of human rights. Children exploited in the sex trade are especially at risk. What role does technology play in the shifting dynamics of human trafficking today?

In this report, researchers at the USC Annenberg Center Communication on Leadership & Policy (CCLP) reveal how those involved in human trafficking have been quick to adapt to the 21st-century global landscape. While the rapid diffusion of digital technologies such as mobile phones, social networking sites, and the Internet has provided significant benefits to society, new channels and opportunities for exploitation have also emerged. Increasingly, the business of human trafficking is taking place online and over mobile phones. But the same technologies that are being used for trafficking can become a powerful tool to combat trafficking. The precise role that

digital technologies play in human trafficking still remains unclear, however, and a closer examination of the phenomenon is vital to identify and respond to new threats and opportunities.

This investigation indicates that mobile devices and networks have risen in prominence and are now of central importance to the sex trafficking of minors in the United States. While online platforms such as online classifieds and social networking sites remain a potential venue for exploitation, this research suggests that technologyfacilitated trafficking is more diffuse and adaptive than initially thought. This report presents a review of current literature, trends, and policies; primary research based on mobile phone data collected from online classified sites; a series of firsthand interviews with law enforcement; and key recommendations to policymakers and stakeholders moving forward.

While the sex trafficking of minors continues to expand across multiple media platforms, our research indicates that the rise of mobile technology may fundamentally transform the trafficking landscape. No other communication technology in history, including the Internet, has been adopted so rapidly around the world.ⁱⁱ The World Bank estimates that 75% of the global population has access to a mobile phone.ⁱⁱⁱ Mobile's ability to facilitate real-time communication and coordination, unbound by physical location, is also being exploited by traffickers to extend the reach of their illicit activities. Traffickers are able to recruit, advertise, organize, and communicate primarily-or even exclusively-via mobile phone, effectively streamlining their activities and expanding their criminal networks. In short, human traffickers and criminal networks are taking advantage of technology to reach larger audiences and to do illicit business more quickly and efficiently across greater distances.

Mobile communication may also represent a

The rise of mobile has major implications both for the spread of human trafficking and for anti-trafficking efforts, and should be carefully considered by law enforcement, policymakers, and activists as they develop strategies to combat human trafficking.

breakthrough for interventions by law enforcement and the anti-trafficking community. Data gleaned from cellphones and mobile networks constitute a trail of information and evidence that can be a powerful tool in identifying, tracking, and prosecuting traffickers. Mobile technologies can also be used to reach vulnerable communities and raise public awareness. The rise of mobile has major implications both for the spread of human trafficking and for anti-trafficking efforts, and should be carefully considered by law enforcement, policymakers, and activists as they develop strategies to combat human trafficking in the United States and worldwide. Furthermore, the respect for privacy and civil liberties, and potential unintended consequences of technological interventions on victims and survivors, are crucial considerations in developing mobile-based solutions.

This research expands on CCLP's 2011 report examining the role of online technologies in human trafficking. Key findings of the 2011 report focused on the use of Internet technologies, particularly online classifieds and social media sites, for the sex trafficking of minors in the United States. The USC Information Sciences Institute (ISI) and CCLP collaborated to develop prototype software designed to detect possible cases of sex trafficking of minors online. Our research indicated that tools such as data mining, mapping, computational linguistics, and advanced analytics could be used by governmental and nongovernmental organizations, law enforcement, academia, and the private sector to further anti-trafficking goals of prevention, protection, and prosecution.

The CCLP Technology & Trafficking Initiative was launched in June 2010 in coordination with Alec Ross, Secretary of State Hillary Clinton's senior adviser for innovation, and Ambassador Luis CdeBaca, head of the State Department's Office to Monitor and Combat Trafficking in Persons. Both Ross and CdeBaca have stressed the need for increased information and understanding of the role of technology in trafficking. International fieldwork conducted by the CCLP research team in Cambodia, Haiti, Saudi Arabia, Thailand, and Vietnam has provided further evidence of the potential to harness information technology for counter-trafficking efforts.

Domestically, CCLP has convened a series of meetings with U.S. leaders from law enforcement, government, private technology firms, nongovernmental organizations, and academia to explore the online trafficking landscape. For example, in November 2011, CCLP and California Attorney General Kamala Harris' office co-hosted a multi-sector meeting to develop partnerships and policy recommendations around technology and trafficking issues. Since the launch of CCLP's Technology & Trafficking Initiative in 2010, there has been commendable progress in increasing attention to and understanding of technology's role in trafficking across sectors. However, many questions remain unanswered, and continued evidence-based research is required to fully comprehend the problem and design pragmatic, effective solutions.

The growing awareness of technology's central role in human trafficking is an important step forward, but technological development is prone to constant and rapid evolution. In order to keep pace with the ongoing transformation of the trafficking landscape, counter-trafficking responses will need to maintain constant vigilance and adopt mobile technology as a central tool within a comprehensive strategy. Looking ahead to President Obama's second term in office, we urge the White House to build on his commitment to "turn the tables" on traffickers, and continue to be a leader in innovative solutions.

As human trafficking, and many of today's most pressing social issues, become increasingly mediated by technologies, the negative and positive dimensions of technology's impact on social change and human rights must become vital considerations.

The Rise of Mobile and the Diffusion of Technology-Facilitated Trafficking

TABLE OF CONTENTS

I. Introduction	8
II. Definitions	9
Human Trafficking	9
Technology-Facilitated Trafficking	9
A Note on Domestic Minor Sex Trafficking and Related Terms	10
III. Current Research on Technology and Trafficking	11
IV. Current Federal and State Policy on Technology and Trafficking	14
V. Private-Sector Initiatives	16
Communications Decency Act and Anti-Trafficking Efforts	18
VI. Digital Activism in Anti-Trafficking Efforts	19
Online Petitions	19
Crowdsourcing	20
Amateur Policing	21
Social Media	21
VII. Primary Research: Diffusion of Technology-Facilitated Human Trafficking	22
Beyond Backpage	22
Analysis of Phone Numbers in Online Classified Ad Sites	23
Interviews With Law Enforcement	25
VIII. The Rise of Mobile Phones in Human Trafficking	32
Pre-Paid Mobile Phones	33
The Role of Mobile Carriers	34
IX. Summary of Key Findings, Further Research, and Guiding Principles	36
Notes	39

I. INTRODUCTION

n April 11, 2012, 26-year-old Marquist Piere Bradford—dubbed in the news media as the "Twitter Pimp"1-was arrested in Springfield, Illinois, for sex trafficking of children. Bradford reportedly used Facebook to communicate with a 15-year-old girl from Fresno, California.² According to Bradford's arrest warrant, the teenage girl had been consistently running away from an aunt's home in Fresno and engaging in commercial sex involving pimps since she was 14.3 Another minor, known as Princess, befriended the Fresno girl on Facebook and introduced her to Bradford. After several weeks of messaging via Facebook among the two minors and Bradford, he sent the Fresno girl a bus ticket with instructions to meet him in Sacramento.⁴ Upon her arrival, Bradford began advertising her on various escort service websites, namely MyRedBook and VerifiedPlaymates, and trafficked her for two weeks throughout the San Francisco, Sacramento, and San Jose areas.⁵ Bradford allegedly confiscated the minor's mobile phone and provided her with a pre-paid mobile phone. Bradford also utilized Facebook for recruitment of and communication with his victims, used pre-paid mobile phones to arrange commercial sex sessions and transactions, posted advertisements on escort websites, and bragged about his exploits on Twitter.6

Our understanding of technology's role in human trafficking, while improving, is still in its infancy. Technology, while clearly facilitating trafficking, also can be used as an effective tool to combat it. Evidence-based research that examines the two sides of this issue is imperative for leveraging technology and policy approaches to benefit the vulnerable populations being exploited though trafficking.

While much of the public discussion about sex trafficking and technology has focused on

online classified ad sites such as Craigslist and Backpage, the case above and a host of others like it indicate that technology-facilitated trafficking may be more diffuse than current debates suggest. To be sure, a number of cases involving the sex trafficking of minors mention the role of escort websites and/or online classified ad sites.7 Yet, many cases have surfaced from a variety of sources about the use of multiple media platforms to facilitate domestic minor sex trafficking, including reports of the recruitment of minors for commercial sex on mobile-based social networking applications, such as MocoSpace.8 Other cases illustrate the use of low-tech mobile features such as text messaging and photo messaging to advertise minors to repeat "johns," to coordinate meeting points and terms of the transaction, and to maintain constant communication with the victims.9 Even the most popular online services are reportedly being exploited. Examples involve the use of mainstream social media sites like Facebook and gaming systems with social networking capabilities, such as Xbox Live, to make connections with minors, advertise minors for sex, record sexual videos and images of minors for advertising, and transfer payment for commercial sex with a minor.10 More evidence-based research is needed to investigate the extent of technology's evolving role in facilitating human trafficking. Research is also needed to understand how these emerging platforms can be leveraged to identify trafficking cases and to assist victims.

In 2011, the USC Annenberg Center on Communication Leadership & Policy (CCLP) released a report examining the landscape of human trafficking online, particularly online classified ad sites and social networking sites. Evidence gathered for the report demonstrated that Internet technologies were being used to facilitate human trafficking, particularly the sex trafficking of minors.¹¹ The report also explored the potential of digital tools such as data mining, search analytics, and computational linguistics to combat human trafficking.¹² The CCLP 2011 report provided recommendations and guiding principles for stakeholders developing policy and technological interventions.¹³

The present report expands upon insights provided in 2011 and offers a snapshot of the most current research on technology and sex trafficking, with a specific focus on domestic minor sex trafficking (DMST) in the United States. The past year has seen a notable increase in attention to technology and trafficking from the U.S. government, nongovernmental organizations (NGOs), businesses, academia, and individual citizens. This report provides an overview of these efforts and highlights our own primary research. A key finding is that mobile phones are playing a central role in trafficking, suggesting that technology-facilitated trafficking is becoming more diffuse and extending beyond specific online platforms such as online classified ad sites.

To demonstrate the centrality of technologyfacilitated trafficking in general and the role of mobile phones in particular, this report presents primary research to explore these issues. This research includes a series of interviews with law enforcement and an analysis of phone numbers associated with online classified advertising. This report provides initial evidence to support the claim that technology-facilitated trafficking is more diffuse and adaptive than has been previously documented. The rise of the use of mobile phones in potential cases of DMST has important implications for future anti-trafficking interventions and policy recommendations.

II. DEFINITIONS

Human Trafficking

As noted in the CCLP 2011 report, the definition of human trafficking varies under different assumptions, laws, and agendas.¹⁴ For the purposes of this report, the terms "human trafficking" and "trafficking in persons" will refer to the definition of "severe forms of trafficking in persons" set forth in the Trafficking Victims Protection Act (TVPA) under U.S. federal law.

The TVPA¹⁵ defines "severe forms of trafficking in persons" as:

(A) sex trafficking¹⁶ in which a commercial sex act is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age; or

(B) the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.¹⁷

This report uses the TVPA's definition, with the understanding that the terminology surrounding human trafficking is a contested arena. While we acknowledge the complexity of definitional debates, this study utilizes the terms human trafficking, trafficking in persons, sex trafficking, and labor trafficking as defined above.

Technology-Facilitated Trafficking

By "technology," we refer to information and communication technologies, particularly those constituting digital and networked environments. Technologies that allow users to exchange digital information over networks include the Internet, online social networks, and mobile phones. Digital and networked technologies alter the flow of information between people and thus impact social interactions, practices, and behavior. For example, online technologies allow users to communicate instantly with other individuals and potentially large audiences over vast distances and across geographic boundaries. An increasing amount of our social life is mediated by computers and digital networks—from the mundane aspects of everyday life to the most pressing social issues of our time. In this respect, networked technologies can influence and change social behavior. At the same time, social practices can shape how technologies are used, often in unintended ways.

Technology-facilitated trafficking refers to the social and technical ecosystem wherein individuals use information and communication technologies to engage in human trafficking and related behaviors. Digital and networked technologies impact visibility, coordination, transaction, exchange, and organization. These technologies therefore can impact various aspects of trafficking, from grooming, recruitment, and control of victims, to advertising, movement, and financial transactions. An understanding of how technology is facilitating trafficking is a crucial component for counter-trafficking efforts in the 21st century.

A Note on Domestic Minor Sex Trafficking and Related Terms

This report primarily focuses on the sex trafficking of minors in the United States. Under the TVPA, persons under 18 cannot legally consent to commercial sex acts, and thus are automatically identified as victims of sex trafficking.

This report expressly focuses on sex trafficking of minors, or youth under 18 years old. We recognize, however, that discussions about sex trafficking generally open up various debates about the legal, social, and moral aspects of prostitution in society. We do not intend to conflate the sex trafficking of minors and adults with consensual adult prostitution, nor do we aim to collapse these distinct socio-legal phenomena. The terms "prostitution" and "sex work" conjure varied opinions, including the view that adult women, men, and transgender individuals may choose to engage in sex work. This view contrasts to the perspective that prostitution is exploitative and demonstrative of underlying gender inequalities. For some, the terms "pimp," "exploiter," "john," and "client" are similarly contested in light of the roles and relationships of supply and demand involved in commercial sex or sexual exploitation. The contested and highly nuanced debates surrounding prostitution and sex trafficking and the language deployed to describe individuals' experiences of choice, circumstance, and coercion are critically important, yet far too complex to be given adequate treatment in this report. We therefore limit our focus and use the terms domestic minor sex trafficking, commercial sexual exploitation of children (CSEC), and sex trafficking of youth under 18 interchangeably.

We also recognize the importance of research on labor trafficking; however, few studies to date have comprehensively explored how technology contributes to forced labor practices. Because of limited data on labor trafficking and technology, and the more widespread attention and therefore higher visibility of sex trafficking across digital networks, this report will focus primarily on technology-facilitated DMST. A clear knowledge gap exists in evidence-based research that examines the nexus of technology, labor trafficking, and forced labor practices, and we encourage further research in this area.

III. CURRENT RESEARCH ON TECHNOLOGY AND TRAFFICKING

The CCLP 2011 report¹⁸ reviewed the existing lacksquare research on the role of the Internet and technology in facilitating human trafficking and recommended a number of research questions to consider. Since then, the literature in this area has grown substantially from various multi-sector approaches. Technology and human trafficking have also garnered more attention from government agencies,19 NGOs,20 the private sector,21 and academics.²² Studies on the use of landline phones, computer devices, and handheld and other mobile devices have provided a view of sex trafficking in modern-day society. The following review of current research, while not exhaustive, provides highlights of the spectrum of research underway on technology and sex trafficking.

U.S. government-issued reports are only beginning to include discussions on the role of technology in human trafficking. The 2012 Trafficking in Persons Report released by the U.S. Department of State includes some brief mentions of technologies used both to facilitate and combat trafficking.23 Two reports by the National Institute of Justice (NIJ) released in 2011 do focus on technology-related issues. The first, titled "National Overview of Prostitution and Sex Trafficking Demand Reduction Efforts," examines law enforcement efforts to address sextrafficking demand.²⁴ The second study, "Identifying Challenges to Improve the Investigation and Prosecution of State and Local Human Trafficking Cases," discusses various difficulties law enforcement faces, including technology-related challenges.²⁵ NIJ found that technology-facilitated reverse stings are the third most commonly used tactic nationwide, having been piloted as early as 1995.26 Researchers analyzed a set of 140 closed cases from across the United States and found that 85% were sextrafficking cases, 27% of which used the Internet as a trafficking tool.²⁷ NIJ also found that state laws on sex trafficking positively impacted the rate at which sex-trafficking victims were identified via the Internet.²⁸

In August 2010, the Department of Justice's Project Safe Childhood²⁹ released its National Strategy for Child Exploitation Prevention and Interdiction.³⁰ The threat assessment portion of the report showed increases over the last decade in cyber crimes involving the sexual exploitation of children,³¹ including child pornography, online enticement of children for sexual purposes, commercial sexual exploitation of children, and child sex tourism. The report also outlined the Department of Justice's strategy for addressing the cyber threat of child sexual exploitation. A new national strategy is due for submission to Congress this year.³²

Evidence-based academic research on technology and human trafficking is also growing. Researchers at CCLP and the USC Information Sciences Institute (2012) have published research on the collection and analysis of digital data on the open Internet in order to identify potential cases of human trafficking, specifically the sex trafficking of minors.³³

Through their work at Microsoft Research, boyd, Casteel, Thakor, and Johnson (2011) have provided a framework for research into the role of technology in human trafficking, specifically the domestic demand for commercial sexual exploitation of minors in the United States.³⁴ This framework recognizes the dearth of empirical research on human trafficking and technology's role, but notes that "technology makes many aspects of human trafficking more visible and more traceable, for better or for worse. … We do not know if there are more human trafficking victims as a result of technology, nor do we know if law enforcement can identify perpetrators better as a result of the traces that they leave."35 The researchers also caution against technological solutions without full understanding of the potential unintended consequences, "[a]s a result, new interventions and policies are being driven by intuition, speculation, and extrapolation from highly publicized incidents."36 The framework examines the ways in which technology has impacted the human trafficking ecosystem, identifying 15 facets of the problem and a set of potential issues associated with each.37 The present report explores several of the facets listed in the framework, including Prevention and Education, Identification and Reporting of Victims and Perpetrators, Advertising and Selling of Victims, Searching for and Purchasing Victims by "Johns," and Political and Policy Activities.

Researchers at the Crimes Against Children Research Center at the University of New Hampshire have led several research initiatives on DMST, commercial sexual exploitation of children, and Internet-facilitated juvenile prostitution over the last decade. Finkelhor and Ormond (2004) mined data from the National Incident-Based Reporting System (NIBRS) to present findings that suggest important insights into DMST, including information on age ranges, gender disparities, treatment by police as offenders and/or victims, and independent or group structures.³⁸ In a 2010 study, Mitchell, Finkelhor, and Wolak found that 54% of juveniles who were sexually exploited by a third party found clients through the Internet (20%), through an escort or call service (26%), or at an establishment (9%).³⁹ Of the cases involving a third-party exploiter, 100% of third parties were pimps or other controlling persons.⁴⁰ In 54% of the cases, law enforcement viewed the juveniles as victims, and in 16% as both delinquents and victims.⁴¹ In 2011, Mitchell, Jones, Finkelhor, and Wolak found that

an estimated 569 arrests for Internet-facilitated commercial sexual exploitation of children occurred in the United States in 2006.⁴² Of those cases, 36% involved those who used the Internet to purchase or sell access to identified children for sexual purposes.

Wells, Mitchell, and Ji (2012) have examined how Internet facilitation influences law enforcement perspectives on juvenile prostitution cases and characteristics and found that Internet-facilitated juvenile prostitution cases were more likely to involve younger juveniles and an exploiter who was a family member or acquaintance, in contrast with juvenile prostitution cases that did not involve Internet facilitation.⁴³

Foot and Vanek (2012) have examined the effects of technology-facilitated observations and reporting of suspected human trafficking.44 They note that "Suspicious Activity Reporting (SAR) programs [and] new formats for relaying potential crime information to police (via social media tools)" necessitate that "law enforcement leaders must be aware of this changing landscape and the breadth of new potential reporters of crime."45 Foot also collaborated on research with a team at Georgia Tech regarding the ways in which community-based organizations respond to human trafficking by utilizing technologies to strengthen and expand their networks.46 Stoll, Foot, and Edwards identified three categories of technology-supported activities that assist these networks in combating sex trafficking.47 They also found "that while different technologies are suited toward supporting different aspects of connectedness, gaps may exist in how social media tools support connectedness in civic networks."48 These gaps, they say, are due to the individual nature of technologies such as email, Facebook, and Twitter, and, the authors suggest, "more group-centric technologies can be leveraged to create connectedness in civic networks."49

Researchers are beginning to pay closer attention to the role of technology in sex trafficking; however, further investigation into technology and labor trafficking is clearly needed.

Although greater attention has focused on technology-facilitated sex trafficking, gaps in legal responses are increasingly evident. Kunze (2010) conducted an assessment of laws, international agreements, and other policies relating to Internet-facilitated sex trafficking. She found that the methods and means of online trafficking are developing at much faster rates than laws that seek to protect trafficking victims. Kunze argues for international laws prohibiting the use of the Internet for advertising and selling sex trafficking victims and for locating traffickers who utilize the Internet for victimization, "[I]t is vital that the international community adopt both domestic legislation and international treaty provisions to target sexual predators and human traffickers who use technology and the Internet to enslave minors and adults alike."50

We found little research on the role of technology in labor trafficking. Recent reports from the Asia Pacific Migration Network and Business for Social Responsibility highlighted the use of technology in dubious recruiting practices for migrant labor, yet did not investigate human trafficking claims per se.⁵¹ Todres (2012) examines the private sector's role in combating human trafficking in light of California's Transparency in Supply Chains Act.⁵² This law, which passed in 2011 and obligated compliance by January 2012, requires qualifying corporations to display prominently on their websites the measures they are taking to eliminate human trafficking from their supply chains.⁵³ Todres notes:

Anti-trafficking advocates can capitalize on the private sector's skill set and its own incentives to innovate to improve initiatives to combat human trafficking. That might include innovations in technology or other improvements in safety or efficiency that reduce the pressure to exploit vulnerable individuals.

This review of current literature suggests that researchers are beginning to pay closer attention to the role of technology in sex trafficking; however, further investigation into technology and labor trafficking is clearly needed.

IV. CURRENT FEDERAL AND STATE POLICY ON TECHNOLOGY AND TRAFFICKING

"We're turning the tables on the traffickers. Just as they are now using technology and the Internet to exploit their victims, we're going to harness technology to stop them. We're encouraging tech companies and advocates and law enforcement—and we're also challenging college students—to develop tools that our young people can use to stay safe online and on their smart phones." —President Barack Obama, September 25, 2012

n September 25, 2012, President Barack Obama delivered a widely anticipated speech at the Clinton Global Initiative's annual meeting. He described human trafficking as one of the most pressing "human rights issues of our times,"55 noting that it demands U.S. and global attention. He further detailed his administration's efforts to bolster anti-trafficking responses, which included initiatives focused on leveraging technology to curb trafficking.56 To this end, the White House's Office of Science and Technology Policy and Council on Women and Girls have convened a group of anti-trafficking experts, including advocates, law enforcement, technology companies, and researchers, with the explicit purposes of improving information-sharing efforts among law enforcement, improving training efforts, and utilizing online and mobile technologies to assist victims.57 President Obama's speech was significant in broadly recognizing the role that technology plays in facilitating trafficking and drawing attention to its importance in effectively addressing the issue.

Although Congress has not approved the Trafficking Victims Protection Reauthorization

Act of 2011 (TVPRA) as of this report's publication, the TVPRA could initiate federal action on technology-facilitated trafficking, as well as the utilization of technology in combating human trafficking. Representative Karen Bass (D-CA) successfully added an amendment to the House's version of the TVPRA requiring the Senior Policy Operating Group established by the 2000 TVPA to report to Congress on Internet-facilitated human trafficking.58 The report would include a statistical analysis of federal agency data, factors affecting the pervasiveness of Internet-facilitated trafficking, and challenges to prevention and prosecution. Additional elements of the report include proposals encompassing collaboration between government and private organizations, improved information sharing, and the adoption of new laws, policies, and technologies.59 The Senate version of the TVPRA also focuses on the use of technology to combat trafficking. Technological advancements would be spotlighted by the Presidential Award for Extraordinary Efforts and Technological Innovations to Combat Trafficking in Persons.⁶⁰ Senator Ron Wyden (D-OR) also included a provision requiring the taskforce to provide federal agencies with the necessary information to publicize the National Human Trafficking Resource Center (NHTRC) hotline on their websites.61

According to a 2012 comparison of human trafficking laws in all U.S. states and Washington, DC,⁶² all but Wyoming⁶³ have criminalized trafficking; however, few states have enacted laws that address the role of technology in facilitating and disrupting human trafficking. In order to assist trafficking victims through the use of technology, Maryland⁶⁴ and Vermont⁶⁵ require their state departments of Labor to post the NHTRC hotline information on their websites. A few other states require businesses to post signs with a trafficking hotline number (Texas,⁶⁶

Vermont,⁶⁷ and Washington⁶⁸), and Oklahoma is statutorily required to establish a trafficking hotline.⁶⁹ Finally, Hawaii,⁷⁰ Maryland,⁷¹ and Ohio⁷² have authorized electronic surveillance of suspected traffickers.⁷³

A challenge for legislatures is finding a uniform way to define the technologies used to facilitate trafficking in an era of rapid change. Some state legislatures have enacted laws criminalizing the use of technology in the sexual exploitation of a minor. Though most laws on the sexual exploitation of minors target the use of computers to either provide or solicit a minor for sex, the definitions of technology-assisted exploitation vary. Most of these laws acknowledge that technology has moved beyond computers and have expanded the law's reach to "any other device capable of electronic data storage."74 Virginia appears to be the only state explicitly including "any common carrier or communication common carrier ... or any telecommunications, wire, computer network, or radio communication systems" in its statutes.75

Other state laws specifically target those who solicit sex from a minor through any electronic means.76 Definitions of "electronic means" vary from state to state. Montana focuses on the content and transmission system by defining "electronic communication" as a "sign, signal, writing, image, sound, data, or intelligence transmitted or created in whole or in part by a wire, radio, electromagnetic, photo-electronic, or photo-optical system."77 Pennsylvania defines "computer" as "an electronic, magnetic, optical, hydraulic, organic or other high-speed dataprocessing device or system that performs logic, arithmetic or memory functions and includes all input, output, processing, storage, software or communication facilities which are connected or related to the device in a computer system or computer network."78 Louisiana prohibits anyone

17 or older from knowingly contacting a minor for the purpose of sex via "electronic textual communication," which is "made through the use of a computer online service, Internet service, or any other means of electronic communication, including but not limited to a local bulletin board service, Internet chat room, electronic mail, or online messaging service."⁷⁹ While both Montana and Louisiana pinpoint the form that communication might take, a loophole exists for non-textual contact in Louisiana's statute.⁸⁰

In the last year, Louisiana passed HB 55, prohibiting sex offenders, including those convicted of DMST, from accessing chat rooms, social networking sites, and peer-to-peer networks. However, this law was struck down as unconstitutional and over-broad in its definition of networking sites.⁸¹ In response, Louisiana passed three new laws, effective August 1, 2012. HB 556 requires sex offenders to provide law enforcement with changes to email and online user/screen names within three business days of the change.82 HB 249 requires sex offenders to post notice of their convictions on "networking websites"83 that allow profile pages, photos, and the ability to send and receive messages.84 HB 620 limits the earlier HB 55 prohibitions to only social networking websites, "the primary purpose of which is facilitating social interaction with other users of the website" and that allow users to create profiles and communicate.85 Because the language is limited to websites allowing users to create Web pages or profiles, some social media applications are excluded. Specifically excluded are Internet websites that (1) only provide email, instant messaging, or photo sharing; (2) have a primary purpose of facilitating commercial transactions; or (3) have a primary purpose of disseminating news.86 While HB 620 narrowed the bans proposed by HB 55, it has still received criticism as possibly violating sex offenders' rights.87 As

will be discussed below, the diffusion of trafficking across multiple technological platforms may limit the long-term usefulness of such legislation.

In addition to legislative initiatives, state executive agencies have begun to address technology and human trafficking. Notably, the office of California Atty. Gen. Kamala Harris co-convened a meeting on technology and human trafficking with the CCLP, announced a joint program between Yahoo! and Polaris Project in which a banner with the NHTRC hotline number is displayed when a Yahoo! user searches the keywords "human trafficking", and offers a widget on the attorney general's website that, when downloaded to a private website, displays the Polaris Project/NHTRC banner.⁸⁸

In the past year, California has been active in anti-trafficking legislation. The Transparency in Supply Chains Act (CA Transparency Act) went into effect in January 2012 and requires retailers and manufacturers with more than \$100 million in annual gross sales to post compliance efforts on their corporate websites.⁸⁹ As a disclosure statute, the CA Transparency Act requires companies to reveal whether they have undertaken efforts to evaluate risks of human trafficking in their supply chains, to audit suppliers to ensure they meet corporate standards, to require direct suppliers to certify that products meet the trafficking laws of the countries where the products are produced, and to train employees on human trafficking.⁹⁰

On November 6, 2012, the Californians Against Sexual Exploitation (CASE) Act was overwhelmingly voted into law. The California law will increase victim restitutions and impose harsher sentencing for labor or sex traffickers.⁹¹ Convicted sex traffickers will be required to register as sex offenders and provide law enforcement with their Internet identifiers and service providers.⁹² Any changes will have to be reported within 24 hours.⁹³ An Internet identifier is defined as any email address or user/screen name used to conduct Internet forum or chat-room discussions, instant messaging, or social networking.⁹⁴ An Internet service provider is defined as a business allowing users the ability to access the Internet and explicitly does not include services providing only telecommunication, cable, or video.⁹⁵

V. PRIVATE-SECTOR INITIATIVES

The private sector routinely mines consumer behavior data from online sources in order to craft marketing and advertising campaigns; the next logical step for some technology companies is to mine the same data to craft solutions to social problems. A September 1, 2012, *Miami Herald* article states, "truly ending human trafficking is more complicated than shutting down one website. The entire ecosystem—from the recruitment to the grooming and the selling, almost all done via the Internet—must be addressed."96

The private sector is becoming a source of innovation in counter-trafficking initiatives. In June 2012, Microsoft Digital Crimes Unit and Microsoft Research collaborated on an initiative to support researchers who have creative ideas for clarifying the role of technology in facilitating the commercial sexual exploitation of children.⁹⁷ The Microsoft groups awarded a total of \$185,000 to six research teams studying a wide variety of angles on the issue, including the online behaviors of johns, the impact of technology on the demand for child sex-trafficking victims, the ways in which judges and law enforcement officers understand the role of technology in sex trafficking cases, the clandestine language used in online advertising of child sex trafficking, and the role of technology in improving services for child sex trafficking

victims.⁹⁸ When the research concludes, Microsoft Digital Crimes Unit and Microsoft Research intend to make the findings available to help develop tools for disrupting technologyfacilitated sex trafficking.⁹⁹ Microsoft Digital Crimes public affairs coordinator Samantha Doerr notes, "[a]rmed with better data, I believe real breakthroughs are possible for helping disrupt the dynamics that fuel the child sex trade."¹⁰⁰

In December 2011, Google granted a total of \$11.5 million to counter-trafficking organizations, part of which was allocated to support new initiatives utilizing technology to combat human trafficking.101 This technology-focused initiative reportedly includes projects with Polaris Project, Slavery Footprint, and the International Justice Mission.¹⁰² In July 2012, Google Ideas collaborated with the Council on Foreign Relations and Tribeca Enterprises to host the Illicit Networks, Forces in Opposition (INFO) Summit.¹⁰³ The summit brought together various actors whose work focuses on disrupting illicit activities, including drug trafficking, arms trafficking, human trafficking, and organ trafficking.¹⁰⁴ Workshops provided space for attendees to share ideas, offer solutions, and form new alliances with the resources to rival international criminal networks.105 Google intends for several of the initiatives established at the summit to be launched in the upcoming year.¹⁰⁶

Software company Palantir Technologies has worked with the National Center for Missing and Exploited Children (NCMEC) to improve NCMEC's ability to make sense of all of the data at its disposal.¹⁰⁷ NCMEC uses Palantir's software to search for and analyze information relating to missing and exploited children and sex offenders. Analysts can diagram complex relationships, perform geospatial analysis, search multiple databases simultaneously, and share data and analysis with law enforcement and other partners.¹⁰⁸ In 2012, Palantir also initiated a partnership with Polaris Project to provide the analytical platform and engineering, training, and support resources to the NHTRC to enable the study and application of data derived from their call records.¹⁰⁹

The counter-trafficking efforts of LexisNexis gained considerable notice this year, as it recently emerged with an array of technology-driven tools to assist both the public and private sectors in detecting, monitoring, and researching human trafficking. In collaboration with the NHTRC, LexisNexis developed a national database of social service providers.¹¹⁰ LexisNexis also created an online resource center for attorneys who work with human trafficking victims and is working with the American Bar Association to establish a training institute on civil remedies for victims.111 LexisNexis offers direct financial, legal, and technical advice to the counter-trafficking NGOs the Somaly Mam Foundation and Agir pour les Femmes en Situation Precaire.¹¹² It also established the Human Trafficking Awareness Index, a tool that tracks and analyzes the volume of news articles related to human trafficking produced by 6,000 of the most influential news sources from more than 120 countries.¹¹³ Finally, LexisNexis packaged several of its tools into a Supply Chain Management Solutions toolkit to assist business owners and managers in monitoring supply chains and reviewing the practices of third-party suppliers.114

At JP Morgan Chase, Barry Koch has developed tools for applying anti-money-laundering regimes to human trafficking networks.¹¹⁵ Because money-laundering schemes and human trafficking schemes both tend to involve hidden financial transactions, technological applications for detecting money laundering have proven useful in detecting other illicit transactions, as Koch discovered during an investigation of several credit card transactions at a nail salon during nonbusiness hours.¹¹⁶ This investigation uncovered a human trafficking operation, and Koch further developed a regime for detecting human trafficking through technologically-tracked financial footprints and other collectible data. The establishment of such new counter-trafficking methods can inform other corporations about the impact that human trafficking has on their businesses and how to utilize existing security programs to address the issue.

Communications Decency Act and Anti-Trafficking Efforts

Section 230 of the Communications Decency Act of 1996 (CDA 230) limits the liability of interactive computer service providers for content created by third-party users. According to the CDA, section 230 was enacted to maximize the public's benefit of Internet services by curbing government interference in interactive media and preserving the free flow of expression online.¹¹⁷ However, CDA 230 has become a point of tension as it relates to technology-facilitated trafficking.

CDA 230 distinguishes the publishers of online content from those who provide the platform for hosting the content. It specifically prohibits providers and users of interactive computer services from being "treated as the publishers or speakers of any information provided by another information content provider,"118 thereby creating a "federal immunity to any cause of action that would make service providers responsible for information originating with a third-party user of the service."119 This grant of immunity "applies only if the interactive computer service provider is not also an 'information content provider,' which is defined as someone who is 'responsible, in whole or in part, for the creation or development of' the offending content."120 An interactive computer service provider that invites third parties to post illegal materials or creates such postings,

however, forfeits this immunity.¹²¹

Application of CDA 230 with regard to human trafficking is demonstrated in M.A. ex rel. P.K. v. Village Voice Media Holdings, LLC,¹²² a 2011 case in which a minor plaintiff sought to hold website operator Backpage liable for her sex trafficking victimization. A trafficker posted sexually explicit images of the minor in ads on Backpage's website.¹²³ Noting the distinction between a service provider and a content provider, the court held that CDA 230 immunity extended to Backpage, despite the fact that Backpage provided a search engine for filtering postings in adult categories and profited from users' activities on the site.¹²⁴ The court found that Backpage was not responsible for developing the content of the ad, nor did it do anything to encourage content of that nature.125

As the case above demonstrates, some are concerned that the immunity CDA 230 provides removes the burden on service providers to responsibly police the content on their websites. CDA 230 provides an avenue through which providers can be shielded from liability as hosts of illegal content created by third parties. Additionally, subsection (e) expressly provides that CDA 230 is not to affect the enforcement of laws against obscenity¹²⁶ and the sexual exploitation of children.¹²⁷ Thus, CDA 230 would not preclude individual states from creating and enforcing laws to combat domestic minor sex trafficking, so long as these state laws do not directly conflict with the provisions of CDA 230.¹²⁸

In what might be seen a direct challenge to CDA 230, on March 29, 2012, Washington Senate Bill 6521 (SB 6521) was signed into law,¹²⁹ requiring the hosts of online classified ad sites to verify the ages of people in advertisements for sex-related services, as it criminalizes the direct or indirect publication, dissemination, or display of "any advertisement for a commercial sexual act

which is to take place in the state of Washington and that includes the depiction of a minor."130 Upon passage of the bill, Backpage filed a complaint on June 4, 2012, to declare the new law invalid and enjoin its enforcement.¹³¹ Among its arguments, Backpage claims that CDA 230 preempts the new law because its enforcement "would treat Backpage.com, a provider of an interactive computer service, as the publisher or speaker of information provided by another information content provider."132 SB 6251 was originally scheduled to take effect on June 7, 2012; however, a federal court granted a preliminary injunction on July 29, 2012, blocking enforcement of the law until the court can make a determination as to whether the law conflicts with federal law or is otherwise unconstitutional.133

It is important to note that CDA 230 was also intended to remove disincentives that previously prevented Internet service providers from using blocking and filtering on their services. Whereas some service providers in the past might have refrained from screening material on their websites, fearing that such regulatory action would invite third parties to assert their First Amendment rights, CDA 230 protects providers from civil liability for their good faith screening of offensive material. Subsection (c)(2) provides for this shield, stating that providers and users of interactive computer services will not be held liable for action taken in "good faith to restrict access to or availability of material that the provider or user considers to be obscene, lewd, lascivious, filthy, excessively violent, harassing, or otherwise objectionable, whether or not such material is constitutionally protected." How an Internet service provider would actively determine or identify content that might signal human trafficking behavior remains unresolved.

VI. DIGITAL ACTIVISM IN ANTI-TRAFFICKING EFFORTS

In a growing phenomenon, members of the public are attempting to participate in online anti-trafficking interventions. Digital activism and advocacy are transforming individual and group participation in social causes. In many ways, digital networks have lowered the barriers to citizen participation and are allowing individuals to transcend geographical boundaries and organize around global causes.¹³⁴ In recent years, an outpouring of public involvement online has risen around the issue of human trafficking.

Online Petitions

Petitions are among the oldest forms of communication among citizens in social movements.135 At least since the success of MoveOn in 1998, petitions have experienced a revival, emerging as a trademark of digital activism.¹³⁶ Change.org is among the most visible of the online petition sites; it has hosted a number of high-profile petitions since launching its petition feature two years ago.137 Many of these petitions relate to human trafficking, and the issue consistently ranks among the 12 "Top Causes" featured on the Change.org homepage. In 2010, more than 10,000 Change.org members signed a petition asking Craigslist to shut down its "adult services" section.¹³⁸ After facing pressure from a number of activist groups, government officials, and media outlets, Craigslist ultimately shut down this portion of its site in the United States in September 2010 and worldwide in December 2010.139 As of October 2012, the most popular active petitions on Change.org related to human trafficking include "Tell Village Voice Media to Stop Child Sex Trafficking on Backpage.com" (more than 250,000 supporters),140 "Support the Domestic Minor Sex Trafficking Deterrence and Victims Support Act

[S. 596]" (more than 40,000 supporters),¹⁴¹ and "Tell McGraw-Hill Publishers: Slavery Did Not End in 1865, Include Modern-Day Slavery in Textbooks" (more than 20,000 supporters).¹⁴²

Avaaz, another site campaigning for social causes, has had success with online petitions related to sex trafficking. In January 2011, Avaaz sent a petition with 317,000 signatures to the CEO of the Hilton hotel chain, urging the company to sign more effective codes of conduct and to work with the U.S. chapter of End Child Prostitution, Child Pornography and Trafficking in Children for Sexual Purposes (ECPAT-USA). Four days after receiving the petition, Hilton agreed to train all 180,000 of its international employees in recognizing and preventing the sex trafficking of minors.¹⁴³

While sites like MoveOn, Change.org, and Avaaz demonstrate the potential of online-only petitions, new technologies are increasingly being used to expand the reach and impact of more traditional activist campaigns. In 2009, The Body Shop International partnered with ECPAT for a campaign focused on child sex trafficking that combined awareness programs, fundraising, and legislative change.¹⁴⁴ A petition accompanying the campaign was available not only online, but also in all Body Shop stores between 2009 and 2001. The petition ultimately accumulated more than 7 million signatures worldwide before being delivered to the United Nations and various world leaders and organizations.¹⁴⁵

In all of these cases, it is important to recognize the difficulty in assessing the direct impact of online petitions independent of other factors.

Crowdsourcing

The term "crowdsourcing" has been defined as "the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call."¹⁴⁶ A noteworthy example of crowdsourcing being used to address human trafficking occurred on May 19, 2010, when a 28-year-old MetaFilter member named Dan Reetz posted "Help me help my friend in D.C.," in which Reetz described the situation of a former student of his, a young Russian woman who was traveling with a female friend.

The two women had paid about \$3,000 for a travel exchange program that promised legitimate work in Washington, D.C. Upon arrival in the United States, however, their contact in the program changed the details, insisting at the last minute that they travel to New York City to meet that evening, with promises of hostess work at a lounge. Reetz suspected his friends were being lured into a human trafficking operation, but he was unable to convince them not to travel to New York that evening. The MetaFilter discussion, still available online in its entirety, shows that within minutes of Reetz's first post, members began to offer information and support.147 Members reportedly called human trafficking hotlines and the Russian embassy in Washington, D.C., offered places to stay for Reetz and his friends, and researched the travel agency and lounge where the women were promised work. One user, 24-year-old Kathrine Gutierrez Hinds, volunteered to meet the women at the bus depot in New York where, according to Newsweek, she was able to convince them not to meet the "exchange program" contact.148 Individual cases like this one-in which hundreds of community members mobilized in a matter of hours-suggest the potential to crowdsource around human trafficking issues.

Increasingly, anti-trafficking groups are employing crowdsourcing tactics to assist in their work. The group Oklahomans Against Trafficking Humans (OATH) solicits volunteers to map out known trafficking areas and contact potential victims,¹⁴⁹ and the for-profit startup Labor Voices provides a platform for employees to report on working conditions, allowing companies and watchdogs to better monitor supply chains.¹⁵⁰

Amateur Policing

Individuals such as JohnTV creator Brian Bates are attempting to act by identifying locations where they suspect sex trafficking is taking place.151 While Bates' focus is primarily on prostitution, the self-proclaimed "video vigilante" hosts numerous videos that claim to show underage girls being sold on the streets of Oklahoma City. In early 2011, Bates had a dispute with YouTube over whether such videos were in violation of YouTube's terms of service. Bates and JohnTV ultimately were allowed to post a video featuring a suspected victim of DMST by arguing that it was "a public service message that brings home the reality of child sex trafficking, moves the social conscious and hopefully helps authorities identify this victim so she can be rescued."152 Tactics employed by Bates are controversial and provoke important questions about the efficacy, ethics, and liability of non-expert, amateur forms of policing and vigilantism. Future research is needed to examine the impact of amateur policing by digital activists, specifically on individuals vulnerable to DMST.

Social Media

Facebook: The most widely used social media platform, with more than 1 billion users worldwide, Facebook has become a natural hub for socially conscious networking.¹⁵³ Many anti-trafficking NGOs have created Facebook groups or pages to expand their audience. The Facebook page for the DNA Foundation, for instance, has more than 110,000 "likes";¹⁵⁴ MTV Exit has more than 108,000; and ECPAT UK has more than 29,000.¹⁵⁵ Such organizations use Facebook to

With more than 1 billion users worldwide, Facebook has become a natural hub for socially conscious networking. Consequently, many antitrafficking NGOs have created Facebook groups or pages to expand their audience.

share projects and developments, post relevant news stories, connect with organizations doing similar work, and highlight opportunities for action.

Twitter: Twitter serves as a hub for activism around human trafficking issues. Twitter hosts dozens of influential individuals and organizations focused on human trafficking and appears to be a central venue for information sharing among these users.

For organizations such as The A21 Campaign (about 40,000 followers¹⁵⁶)-launched in 2007 and now operating shelters and transition homes for victims of human trafficking in Greece, Ukraine, and Bulgaria¹⁵⁷—Twitter provides a way to regularly engage with a large and growing audience. Other anti-trafficking organizations active on Twitter include International Justice Mission (about 37,000 followers¹⁵⁸), the DNA Foundation (about 30,000 followers¹⁵⁹), Not For Sale (about 29,000 followers¹⁶⁰), the Freedom Youth Center (about 21,000 followers¹⁶¹), Polaris Project (about 14,000 followers¹⁶²), and the CNN Freedom Project (about 9,000 followers¹⁶³). Organizations and individuals on Twitter are able to collectively amplify the reach and impact of reports and events with real-time networked technologies to a degree never before possible.

22 Technology & Human Trafficking



37

Somaly Mam @SomalyMam 24 Jul Traffickers take advantage of their victims' trust and exploit their vulnerabilities bit.ly/MkOGqa #humantrafficking #endslavery Collapse Reply t3 Retweet Favorite

2:04 PM - 24 Jul 12 via web - Details

FAVORITES

5

Somaly Mam, an anti-trafficking activist and survivor from Cambodia, regularly tweets links to human trafficking stories, events, and other opportunities for activism to her nearly 400,000 followers. For example, in successive tweets on July 24, 2012, Mam informed her followers of three allegedly trafficked women who had just arrived at one of her organization's centers in Phnom Pehn, Cambodia.¹⁶⁴ Later that day, she alerted her followers to a story in the *Calgary Herald* about a woman who had been recruited into a sex trafficking operation by a man she initially met on Facebook¹⁶⁵ (*see above image*).

Twitter appears to be an important venue for raising awareness of human trafficking and mobilizing support around legislation, promoting work and volunteer opportunities, and potentially putting public pressure on individuals and organizations. More research is needed, however, to measure both the positive and negative implications of digital activism in anti-trafficking efforts.

VII. PRIMARY RESEARCH: DIFFUSION OF TECHNOLOGY-FACILITATED HUMAN TRAFFICKING

Beyond Backpage

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As noted in the introduction, a number of reports have surfaced that identify a broader set of online venues where DMST could potentially occur than previously recognized. If these reports are accurate, advertising of potential trafficking victims may have diffused beyond the major websites like Backpage. To date, little evidence has been collected to support such claims. To explore the potential diffusion of technology-facilitated trafficking more closely, we examined a number of online classified ad sites and adult sites that have been identified in reports as potentially containing advertisements for DMST.

As discussed in the CCLP 2011 report, no researcher or investigator can ascertain with 100% confidence that a particular online advertisement is a positive case of DMST, just as one cannot be completely certain whether an advertisement is a negative case. Various indicators, such as keywords, may increase the probability of properly identifying potential cases of DMST. To increase the probability further, a trained expert is needed to identify a potential victim of minor sex trafficking.

It is clear from prior research that online classified ad sites and adult sites have been used to facilitate sex trafficking. While Backpage is a



highly visible online classified site that advertises commercial sex in adult sections, numerous other online classified ad sites reportedly average more than 100,000 unique U.S. users per month, including Adult Search, MyRedBook, and Cityvibe.¹⁶⁶ Thus we sought to investigate if online advertising from posters follows a pattern of diffusion across multiple sites.

Our primary research suggests that individual phone numbers are often linked to similar posts on multiple sites. For example, we selected the above ad from Backpage that contained key terms that were identified in our last report as potential indicators of DMST: "18," "girl," "new," and "visiting."

Reply: click here

HI Guys I'm A

You will love me in every way, I'm a Petite Sexy Girl who will Rock your world with just one time with me!!!!!

III INCALLS SPECIALS

Angelina 702-

Poster's age: 18

 Location: Los Angeles, Torrance Lomita Carson Redondo Hermosa

Post ID: 2 losangeles

Using a simple Google search, the same phone number was found in escort ads across adult classified ad sites including, but not limited, to Backpage, EroticMugShots, MyRedBook, LocalEscortPages, MyProviderGuide, FindHot Escorts, Adult Search, and nsaPals.¹⁶⁷ The phone number was also found in ads in multiple cities on Backpage Los Angeles, Backpage San Francisco, and Backpage Las Vegas. And the same phone number was associated with similar-looking photos with different names on MyRedBook.

We make no assertion that the example above is a case of sex trafficking. We do assume that based on prior evidence, DMST may take place on such platforms, and that simple searches for certain identifiers can reveal common advertising methods that may be utilized by traffickers. Based on our observations, one can hypothesize that advertising across multiple sites, beyond Backpage, is a common practice in general. Other sites and platforms that have been reportedly used by adults to solicit or recruit minors for commercial sex range from broadly popular sites such as Facebook and MySpace¹⁶⁸ to more niche networks such as Tagged.com,169 and gaming sites such as MocoSpace170 and Xbox Live.171 Further evidencebased research is needed to investigate these claims.

Analysis of Phone Numbers in Online Classified Ad Sites

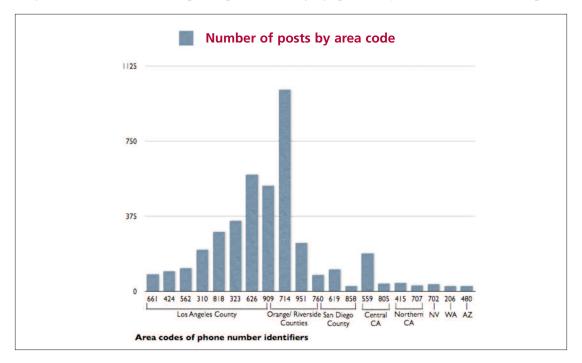
Looking at publicly available data from posts in the Los Angeles adult section of a popular online classified site from March 1, 2012, through May 31, 2012, we examined posts with regard to the publicly listed phone number. We analyzed the posts to determine the number of unique posts over the three-month period, how many unique phone numbers were used in these posts, type of phone number, and how frequently each unique phone number was used in different posts.

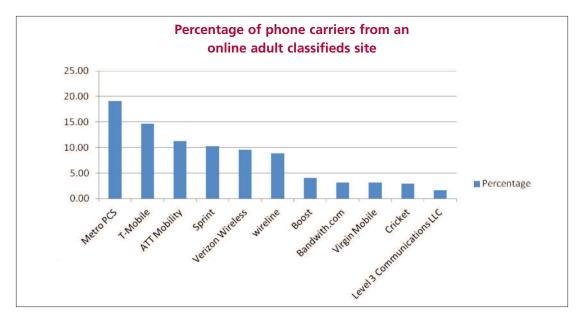
One finding is that while our data set included 18,429 unique posts in this adult section over three months, only 4,753 unique telephone numbers were associated with these posts. Of those 4,753 unique numbers, about half (2,050) posted a sex advertisement only once during the three months. Of these 4,753 unique numbers, analysis suggests at least 80% are mobile phone numbers.¹⁷² The other 2,703 unique phone numbers were identified across multiple postings in the adult section.

We found that certain phone numbers were responsible for a disproportionate number of adult ad postings. For example, the 17 most commonly posted phone numbers, all of which were assigned to mobile or Internet phone providers,

Posts collected from adult section		
March 1-May 31, 2012 1	8,429	
Unique phone numbers listed		
within these 18,429 posts	4,753	
Unique phone numbers associated		
with one post only	2,050	
Unique phone numbers associated		
with multiple posts	2,703	
Unique phone numbers associated		
with 25+ posts	112	
Phone numbers accounted		
for 25% of all 18,429 posts	107	

were responsible for 1,863 posts over three months. The 107 most common phone numbers accounted for 4,615 posts. Finally, an examination of posts from the most commonly listed phone numbers revealed that identical phone numbers were sometimes used to advertise individuals of different ages and descriptions, in different locations, at different times. An examination of the frequency of posts by area code provides a snapshot of the geographical layout of adult section posts.





Predictably, the majority of posts for the an online adult classified site for Los Angeles come from Los Angeles County and Orange County area codes. However, the Central California exchange 559 exhibits a high number of posts relative to its proximity to Los Angeles.

A number of free and pay sites on the Web offer services to determine the origin of a phone number. Using one of these common online services for the numbers collected during the threemonth period, our research indicates that Metro PCS accounted for 19.1% of the total phone numbers followed by T-Mobile (14.6%), AT&T Mobile (11.3%), Sprint (10.3%), Verizon Wireless (9.6%), Wireline (8.8%), Boost (4.1%), Bandwidth.com (3.2%), Virgin Mobile (3.1%), Cricket (3%), and Level 3 Communications (1.6%).

This analysis of adult classified ads and mobile phone carriers provides insights into the role mobile in potential cases of human trafficking and DMST.

Interviews with Law Enforcement

Research Scope and Methods

If DMST is understood as a complex issue requiring a multi-professional and multi-sector response, then anti-trafficking efforts in one sector, such as law enforcement, have an impact on responses in other sectors.¹⁷³ To understand the ways in which current anti-trafficking efforts involving technology foster intended and unintended consequences for frontline law enforcement as well as for individuals vulnerable to trafficking, we collected and analyzed primary data based on observational studies and interviews with local and federal law enforcement responsible for identifying cases of DMST.¹⁷⁴

Data-collection activities included firsthand observations of law enforcement identification efforts and in-depth interviews with 15 key local and federal law enforcement agents over an 18week period in six urban and metropolitan areas. Interviews and observations were broadly focused on law enforcement perceptions of technology and how law enforcement leverages technology to investigate human trafficking cases.¹⁷⁵ A key insight in the CCLP 2011 report was that technology can both facilitate trafficking and be harnessed to combat it. Law enforcement perceptions of technology can similarly advance or hinder the technological solutions that may best support responses to DMST. While data from law enforcement can offer important insights about DMST cases identified to date and offer clues as to how DMST cases are impacted by technology, it is by no means exhaustive. We have chosen to focus on primary research with law enforcement since they have historically been charged with identifying victims of DMST and prosecuting traffickers.¹⁷⁶

We do not mean to imply, however, that law enforcement or criminal justice constitute the only effective responses to DMST. Future research might focus on how public health and nongovernmental anti-trafficking efforts can be leveraged to assist vulnerable and exploited youth. It is additionally important to note that the perspectives of trafficked youth are invaluable to understanding the dynamics of technology-facilitated trafficking and the most appropriate sociotechnical solutions. However, little research is available on trafficked youths' perceptions of antitrafficking interventions and fewer still that focus on technology. This study sought to include interviews with trafficked youth; however, researchers were confronted with methodological issues, including gatekeeping by some NGOs, social service providers, and probation departments, which, in an effort to protect youth, remain hesitant to partner with researchers. Anti-trafficking stakeholders might therefore consider partnering with social science researchers who are trained experts in designing studies that prioritize the perspectives of trafficked youth.

Finally, we caution that data gleaned from qualitative interviews and direct observations are not generalizable, and do not resolve questions about the quantitative scope of the problem or whether technology directly correlates with increased rates of DMST. These, too, are areas that need more evidence-based research. The qualitative data presented here is neither allinclusive nor reflective of the perspectives of all law enforcement on these issues. Despite these limitations, this study nonetheless aims to describe how law enforcement understands the connections between technology and DMST and the solutions they deem most appropriate to solving the problem.

Craigslist Revisited

When Craigslist indefinitely shut down its adult services section,¹⁷⁷ it was widely seen as an important milestone in curbing DMST. Yet, law enforcement agents interviewed for a separate study¹⁷⁸ urged caution about the overall impact of shuttering the Craigslist adult section, suggesting that closing one site runs the risk of sending traffic to other online advertisement and social networking sites.¹⁷⁹ Some have colloquially referred to this as the "whac-a-mole"¹⁸⁰ problem and claim that shutting down one site does not address the root causes of the problem, such as the wider issue of demand for exploited and underage youth.

The Craigslist case study holds lessons to those involved in policy discussions, specifically regarding the effective relationships between Craigslist and law enforcement personnel. Two years after the shutdown of Craigslist's adult services section, some law enforcement still comment on the impact its closure had on their work. One federal law enforcement agent who worked on a number of DMST cases summarized:

There was a big outrage that Craigslist was allowing prostitution and juvenile prostitution to occur. My response to that was that they were very pro-law enforcement. If I serve them, I get the subpoena back, the results [of] which help my case. My response was that they were always very cooperative. Yeah, we don't like it. But guess what? If you shut that down, they're going to go somewhere else. And what happened? The Craigslist Adult Section gets shut down and what happened? Now they go to RedBook. Now I can't even get a response from RedBook because they're based out of the country. So, we don't like it, but, in order for us to fight child prostitution and combat this problem, we're going to have to go after it from different angles. It's not just law enforcement but it's everybody. We need to work together in order to address this problem.181

This agent's narrative raises several critical issues. Chief among them is that shutting down the Craigslist adult services section routed traffic to other online sites such as MyRedBook, which is located beyond the U.S. government's jurisdictional reach. These observations suggest that the closure of Craigslist affected pre-established cooperation arrangements between the company and law enforcement. This issue should not be underestimated, given the extensive time, energy, and institutional will required to forge mutually beneficial anti-trafficking collaborations.¹⁸² According to certain law enforcement agents, some of the cooperative agreements that were formed between Craigslist and law enforcement-including the company's timely response to subpoenas, as well as the requirement that posters verify their phone number, provide credit card authorization, and pay a "fee to post an adult service ad"183were terminated when the section was shut down.

Not all respondents agree that Craigslist was an ally to law enforcement; neither have all law enforcement agencies lamented its closure. Even among respondents who recognized Craigslist's pro-active law enforcement efforts, some stressed that cooperation alone did not provide sufficient reason to keep its adult section open, as detailed by one police officer:

I think it comes down to a moral perspective. I don't necessarily think that allowing [Craigslist's adult section] to stay open so they can profit from [sex trafficking] is the right thing to do. When Craigslist started taking the heat that it did, everybody went to Backpage. Well, we were able to follow them to Backpage. If Backpage were to get closed down on its escort activities, we would follow them wherever they go next. Some of the concerns I've heard about that are that once companies go [to an] offshore server, we wouldn't have any reach. That poses us a new technological problem, but I don't think that we should shy away from doing the right thing now for fear that we wouldn't be able to do the right thing later.¹⁸⁴

Although law enforcement perspectives on the issue are wide-ranging, the Craigslist case study points to the "missed opportunity to explore creative solutions to the problem of trafficking online."¹⁸⁵ In light of the recent push to expand collaborative alliances between technology companies and law enforcement, such as initiatives advanced by Google, Microsoft, and Palantir, the Craigslist case underscores the need for industrywide strategies and standards of cooperation to ensure that law enforcement can respond adequately to each new technology and social media company that emerges. Finally, it demonstrates the policy limitations of focusing on one site without considering the broader digital ecosystem that facilitates human trafficking.

The Anti-Trafficking Digital Universe

Primary research with law enforcement personnel indicates that the digital universe used to facilitate DMST is far more diverse, diffuse, adaptive, and geographically complex than previously discussed. Online classified advertising sites are still widely acknowledged as an important focus for law enforcement. However, a variety of other social, informational, and mobile networking sites, including Facebook, MocoSpace, and Tagged, play an increasingly critical role in fostering the recruitment of minors into sex trafficking and in providing a platform for trafficker-pimps, trafficked minors, and johns to maintain communication with one another more generally. Facebook and Moco-Space in particular were cited as popular networks for the recruitment of minors for commercial sex, though law enforcement has limited knowledge and training in navigating social networking sites. 186

Initial evidence suggests that because social networking sites can be accessed through mobile applications on smart phones, these networks play a more significant role in recruiting and advertising minors than has been previously documented, though more research is needed. Such findings also raise a few important issues. First, social networking sites blur the boundaries between what counts as "recruitment" and "advertisement." Although social media sites may be places of initial recruitment, they can also facilitate communication between traffickers and trafficked persons. For example, according to interviews and observations, youth report having had access to their traffickers' Facebook passwords and regularly using social media accounts while still in their trafficking situations.¹⁸⁷ Furthermore, since classified ad sites are widely assumed to be the main venue for advertisement of DMST, law

enforcement respondents acknowledge that social networks coupled with mobile phones and applications provide a multidimensional, participatory, networked realm for minors, traffickers, and johns to communicate with one another. Second, and specific to DMST, traffickers and trafficked minors are not solely utilizing one ad site but rather draw upon a variety of sites and technologies, such as chat rooms, message boards, and text messages.¹⁸⁸

A federal agent described the state of technology-facilitated DMST:

Last week we had a case where a juvenile was lured into prostitution by a Facebook account. [Facebook] has definitely played a role in the work we do. These girls use [cell] phones, the Internet ... Now everything, all the ads are being posted through the Internet. Child prostitution and prostitution is occurring from a computer to a hotel room.¹⁸⁹

This agent's observation suggests an important technological shift in the dynamics of DMST. Law enforcement perspectives suggest the emergence of a multi-platform digital ecosystem that defines underage sex trafficking and online and networked sociality more generally. Just as individuals are leading ever more "mobile and networked" lives¹⁹⁰ and using social media and mobile phones in novel ways, trafficked minors and traffickers are too, but with varying degrees of technological fluency.

Law enforcement interviews further showcase the ways in which the Internet, social media, and mobile phones are changing the dynamics of street-based prostitution. Despite the fact that traffickers may use social media such as Twitter,¹⁹¹ MocoSpace,¹⁹² YouTube,¹⁹³ and Facebook¹⁹⁴ to recruit and advertise minors, law enforcement also notes that traffickers diverge in their technological sophistication. This is an important finding and useful to broader assumptions about the connection between online and offline variations of DMST. Law enforcement interviews call attention to the fact that street-based commercial sex has not gone away per se, but that it may now primarily be used when access to technology is limited. Street-based commercial sex may also be used when digital tools do not deliver immediate financial returns, as one federal agent described:

Some pimps will just post [minors] online and if it's a slow day and they're not getting calls, they'll go to the tracks and start working. Sometimes they're [minors] walking the stroll carrying their cellphone so they have ads at the same time as they're walking the stroll. I think it all really depends on the pimp. Some pimps don't have [minors] walking the stroll at all. Some pimps don't use the Internet at all ... we had a case of an entire family of pimps who were pimping out juveniles and they had their own little system of using cellphones without using the Internet.¹⁹⁴

Although technology may contribute to DMST, the saliency of technology seems closely tied to traffickers' and trafficked youths' access to and familiarity with various technologies, and the social capital they wield more generally.¹⁹⁵ Here, the pertinence of technology could be tied to traffickers' and trafficked minors' age, race, gender, class, ethnicity, and sexual orientation though, again, more in-depth research is needed. While the online preferences and social networking behaviors of traffickers and trafficked persons may vary extensively, interviews with law enforcement stressed the widespread importance of one technology: mobile phones.

Mobile Phones

Those in law enforcement interviewed for this study widely recognized the critical importance of mobile phones in combination with social networking and classified ad sites in facilitating the recruitment and advertisement of minors. Interviewees also described mobile and smart phones—whether those belonging to traffickers or trafficked persons—as an "evidentiary gold mine" and an important part, if not the most critical element, in building their cases against traffickers. One agent who works on cyber crimes including DMST cases relayed:

Cellphones and smart phones are a key part of our investigations. As smart phones get smarter, I like to think of them as tiny computers ... [Y]our typical, cheap cellphone allows you to get online, allows you to check your Facebook, that's the norm I think ... [E]very year, the smart phones get cheaper. If you think of a smart phone as a tiny computer, anything you do on your email, your Skyping, your Facebook, all that happens to be on a phone form factor rather than on your laptop. Almost everyone has cellphones. That's the way they communicate.¹⁹⁶

Law enforcement recognizes the importance of data obtained from mobile phones and using technology to build trafficking cases. Such data may be used to corroborate relationships between traffickers and trafficked youth, and in gathering information about traffickers, such as trafficked persons' movement and geolocation. These benefits also raise questions about balancing privacy rights and civil liberties more generally with the need for safety and security of minors in particular. Further research on this topic is needed.

Mobility itself poses other issues for law enforcement. Whereas old telephones were fixed to a location, cellphones afford users the freedom to roam. This challenge is compounded by the fact that the data retention practices of telecommunications companies vary extensively, and each mobile device is has different functionalities, particularly in terms of geolocation services. How should private companies protect consumer data while aiding law enforcement with active investigations where minors are at risk? Other questions arise as a result of the expansion of the mobile phone and mobile application universe in the absence of industry-wide standards about how to store data and how to respond to law enforcement subpoenas and preservation letter requests in a timely, consistent, and easily searchable format. Thus the use of mobile phones in DMST, and the rapidly changing nature of those devices, require law enforcement to stay continuously current in their training on technology and policy.

Shifting Investigative Tactics: Online Low-Hanging Fruit

Interviews with law enforcement suggest that the technological tools used by trafficker-pimps and trafficked youth vary extensively. Law enforcement officers focus their investigative tactics on wellknown classified ad sites for two primary reasons: limited resources and the widespread perception that DMST is moving indoors, facilitated "from a computer to a hotel room." One local sex crimes investigator summed up his taskforce's focus as such:

We don't just go to the [street] tracks. We go online first and try to see who is a juvenile from the ads. Then we set up stings with an undercover officer and try to get dates. We score a lot of juveniles this way.¹⁹⁸ For this officer, going online means monitoring well-known classified ad sites. Another vice detective with extensive experience in domestic and international sex and forced labor cases confirmed this trend:

Our general jumping-off point is the websites. Backpage, Naughty Reviews, Humaniplex, MyRedBook, all these websites that we access, we look at the pictures, and then we're able to target, based on the picture, people that we may believe are being trafficked. We don't generally troll Facebook. We're trolling the adult classifieds.¹⁹⁹

Law enforcement interviews suggest that policing the "tracks," where street-based commercial sex is known to take place, is akin to going after "low-hanging fruit." The visibility and accessibility of street-based commercial sex render it far easier to police and investigate than indoor commercial sex venues, such as clubs, brothels, or hotel rooms.

In much the same way that street-based "tracks" are the low-hanging fruit of anti-trafficking policing efforts, online classified ad sites like Backpage and MyRedBook have emerged as the online equivalent of low-hanging fruit. These sites are visible, accessible, and well known to law enforcement staff. On one hand, this accessibility makes it easy even for those who have limited training in technology-oriented investigative tactics or who are restricted in their online access to participate in investigations. On the other hand, law enforcement's widely known presence on popular classified ad sites has led some local police and anti-trafficking experts to see it as the "bottom of the online barrel," frequented by some of the least technologically savvy trafficker-pimps.

Interviews with law enforcement underscore the prominence of classified ad sites in facilitating

trafficking. However, they also suggest that law enforcement's presence on and awareness of wellknown classified ad sites have prompted experienced trafficker-pimps to go elsewhere, such as to a new crop of sex-specific classified ad sites. Law enforcement also note that some users of classified ad sites are becoming more sophisticated, using anonymizing tools in an effort to evade detection and surveillance by law enforcement personnel. The presence of undercover officers on well-known sites has led one detective to speculate, "No one uses Backpage anymore. Everyone thinks cops are on there now." Although digital technologies are rapidly changing, law enforcement agents' lack of technological resources and training, particularly at the local level, might explain the focus only on classified ad sites without more attention to the wider digital ecosystem used to facilitate DMST.

Low-Tech Challenges to High-Tech Anti-Trafficking Efforts

In spite of recent governmental and corporate attention to leveraging high-tech solutions to address human trafficking, data from law enforcement underscore some persisting low-tech issues, including (1) uneven technological training, (2) a lack of resources and capacity to respond to the issues, and (3) gaps in effectively sharing information across multiple jurisdictions and professional sectors.

Anti-trafficking training is generally prescribed for law enforcement agents, though particular emphasis has been placed on training specialists in policies and legal instruments.²⁰¹ Because of the multi-jurisdictional nature of the problem and a lack of uniformity in anti-trafficking training, gaps exist in information sharing between local and federal law enforcement agents and among specialized units and frontline patrol officers. According to interviews, federal law enforcement taskforces have aided with some of these training and capacity issues. One federal agent commented:

One way we address a lack of technology training and resources is in the context of a taskforce. By being a part of a taskforce that involves several local agencies...we're able to provide funding, training, and equipment to those members who sign an agreement with us and literally sit co-located with us in the same office. [We] host trainings and send agents and officers to a more broad training, whether law enforcement in general or a more broad industry training, to social networking or high-tech training to have a well-rounded training base. It's basically a network—a network where we meet annually for conferences to discuss how different districts are handling trends.202

Local and federal law enforcement interviewed for this study acknowledge the important role that federal law enforcement taskforces play in filling some of the local gaps in capacity and training, specifically with respect to the analysis of digital evidence. Yet, local officers also observe that, though federal law enforcement may have more technological capacity and training, they have limited resources to offer technological assistance to every local law enforcement agency or individual officer that requires it. In general, a widespread lack of comprehensive technological training exists, particularly at the local level. As one police officer shared: "These investigations are new for all of us. I've made a lot of mistakes. We are learning from our mistakes."203 Whereas some units and police departments have in-house analysts dedicated to analyzing online content and digitized evidence, many jurisdictions lack such experts, leaving local police officers with limited knowledge and insufficient training, gaps which are likely to increase in the wake of widespread cuts to local, state, and federal law enforcement budgets.

Many jurisdictions also lack the most basic equipment. For example, text messages from mobile phones can assist law enforcement in building their cases, yet not all agencies have forensic data extraction services or forensic equipment and machines on site to extract cellphone data. Yet, it is not solely a lack of sophisticated equipment that impedes law enforcement investigations of DMST. In addition, some agencies restrict local agents' access to social networking and classified ad sites, impeding agents' ability to gather information. Finally, though human trafficking is a multi-jurisdictional issue, law enforcement agencies, especially at the local level, have varied access to information and databases outside of their jurisdictions.

This primary research reflects new trends and pressing technological challenges that confront law enforcement and impact their anti-trafficking responses. In addition to the multi-platform digital ecosystem that facilitates DMST and defines online, mobile, and networked communication patterns more generally, a lack of law enforcement training, resources, and gaps in knowledge-sharing pose considerable challenges in leveraging the benefits that technology offers in combating DMST.

VIII. THE RISE OF MOBILE PHONES IN HUMAN TRAFFICKING

B ased on the evidence gathered above, a key finding of this report is that mobile phones play a central role in facilitating potential cases of DMST. Online advertisements for potential DMST victims commonly contain a mobile phone contact number. Logistical information such as time, place, pricing, and types of services are communicated through phone calls or text messages on mobile phones. As an increasing number of websites develop mobile applications, posting of advertisements can be done primarily via mobile phone, as can viewing and responding to these advertisements.

Because the social actors involved in trafficking can use mobile phones to communicate, coordinate, organize, advertise, etc., the information transmitted across mobile networks could serve multiple evidentiary and investigatory purposes. The widespread use of mobile phones can also be utilized for social outreach and interventions.

Scant research or policy attention to date has focused on the issue of mobile phone use in DMST. The intersection of mobility, digital technologies, and minor sex trafficking brings new challenges and opportunities that require careful research and analysis.

For example, technology-facilitated sex trafficking networks often rely upon the anonymity or contrived identities of victims and traffickers in order to operate.²⁰⁴ According to Samantha Doerr, public affairs manager at Microsoft's Digital Crimes Unit:

Child sex trafficking is simply a very different problem than other technologyfacilitated child sexual exploitation ... We need to look at the methods and language used for advertising—how johns go about searching, the use of mobile phones in child sex trafficking, and how a transaction is coordinated.²⁰⁵

Although the field of technology forensics is exploring ways to disrupt human trafficking online by using trace data to identify perpetrators, mobile technology is already shifting the spaces from which we can collect those traces.

Pre-Paid Mobile Phones

In the course of this research, the role of pre-paid, no-contact, and disposable mobile phones has surfaced as a growing phenomenon. In the analysis (page 25) of phone numbers over three months for a popular adult online classified site in Los Angeles, 19.1% of all numbers were from MetroPCS-a major pre-paid mobile phone carrier. This percentage is dramatically greater than MetroPCS' 3.4% national market share. According to a local law enforcement officer interviewed, "the existence of multiple phones is not uncommon" in sex trafficking operations.²⁰⁶ The officer goes on to explain that both contract phones and disposable phones are used by traffickers; a recent arrest of a trafficker involved in DMST turned up four "burners"207 and one personal phone.²⁰⁸

Pre-paid, pay-as-you-go, and disposable phones are cellular phones purchased without a long-term contract and with service and features paid for upfront. This differs from the traditional billing arrangement, whereby subscribers enter into contracts with mobile network operators and are billed monthly for their usage.²⁰⁹ These postpaid mobile contracts are normally tied to individual cellular phone serial numbers.²¹⁰ The contract involved with the post-paid billing method might make this arrangement undesirable or unavailable to some potential users. Those without established credit, for example, may be unable to purchase a mobile phone or phone service.²¹¹ In addition, consumers may only wish to use a cellular phone for a limited period of time, without "incur[ring] the monthly costs for the usage and service."212

Because pre-paid mobile phones and services do not require a contract, personal identification, or credit check for purchase, they have been described as "one of the last remaining anonymous communication tools."²¹³ As with all technologies, the implications are both positive and negative. Potential anonymity makes disposable phones a potential tool for criminal activity.²¹⁴ At the same time, pre-paid mobile phones allow access to marginalized groups, such as migrant workers and political dissidents. For others, it makes economic sense to employ a means of communication that is not dependent upon the contractual obligations of a post-paid mobile phone. Thus pre-paid mobile phone technologies are certainly not a cause for concern in and of themselves.

Nevertheless, several states have introduced bills that would require registration of pre-paid phones and identification at time of purchase, though none have been passed into law.215 In 2010, Senate Bill 342-the "Pre-Paid Mobile Device Identification Act"-was introduced to implement an identification requirement for the purchase of pre-paid mobile phones, but no further action has been taken on the bill.216 Critics have suggested that such a law would violate consumers' rights to privacy and other civil liberties, would place unreasonable burdens on retailers, and would not be effective in reducing crime.²¹⁷ Registration of pre-paid phones is already required in countries including Australia, Germany, Indonesia, Japan, Malaysia, Norway, Singapore, South Africa, Switzerland, and Thailand.²¹⁸

In a recent case from the United States Court of Appeals for the Sixth Circuit, the court held that the defendant had no "reasonable expectation of privacy in the data emanating from his [payas-you-go] cellphone that showed its location."²¹⁹ The defendant, a "courier in a large-scale drugtrafficking operation," challenged law enforcement agents' tracking of his cellphone to locate the defendant, arguing that it constituted a "warrantless search that violated the Fourth Amendment."²²⁰ In finding that the defendant's Fourth Amendment rights had not been violated, the court explained, "if a tool used to transport contraband gives off a signal that can be tracked for location, certainly the police can track that signal. The law cannot be that a criminal is entitled to rely on the expected untrackability of his tools."²²¹ This decision calls into question the privacy protection associated with pre-paid devices.

Given the potential of disposable phones to facilitate human trafficking and the need to balance regulatory and privacy concerns, further research in this area is advised.

The Role of Mobile Carriers

Mobile carriers could take the initiative in countertrafficking efforts. In the United States, the four major mobile carriers are AT&T (98 million subscribers²²²), Verizon (94.2 million²²³),Sprint (55 million²²⁴), and T-Mobile (34 million²²⁵). At this writing, our researchers could not find any publicized program through any of these providers that specifically targets human trafficking.

As an example from a potentially analogous issue, in October 2002, Verizon implemented a nationwide domestic violence support service called #HOPE. Users can dial #HOPE from any Verizon phone and receive confidential crisis intervention and support via a toll-free, airtimefree call.²²⁶ In August 2012, Verizon also launched a HopeLine application for Android smart phones and tablets aimed at providing quick resources to victims as well as raising awareness about domestic violence in the United States.²²⁷

While we would like to see mobile carrierbased interventions expanded for countertrafficking innovations, the Annenberg Center on Communication Leadership & Policy advocates for a careful, research-based approach to any technological interventions in human trafficking. Some lessons might be learned from recent antitrafficking initiatives in Ukraine and Haiti that were spearheaded by mobile carriers in coordination with NGOs. These international examples were selected to demonstrate the potential for innovative cross-sector initiatives.

Cross-Sector Collaboration in Mobile Anti-Trafficking: Ukraine

Ukraine is a major source country for internationally trafficked persons; in the last decade, an estimated 420,000 persons have been trafficked across its borders.²²⁸ Furthermore, Ukraine has an estimated 200,000 domestically trafficked persons.²²⁹ In 2007, Ukrainian wireless providers implemented an anti-trafficking program.²³⁰ The three major phone service providers (KyivStar GSM, UMC, and Astelit) partnered with the International Organization for Migration's (IOM) mission to address the issue of trafficking in the country.

As a first step, the partners created a toll-free anti-trafficking phone number-527-through which callers can receive information about dangers that migrants could face outside of Ukraine. Mobile providers route all calls to this number to the IOM migration and counter-trafficking tollfree helpline. (At this point, the program covers voice calls but not text messages.) According to Kateryna Ardanyan, an IOM counter-trafficking specialist in Ukraine, since the inception of the partnership in April 2007, more than 73,000 consultations have been provided to callers.²³¹ Furthermore, the helpline is advertised in information campaigns targeting potential migrants. IOM regional partners, including NGOs, also advertise the helpline in their awareness-raising campaigns. When users call in, helpline personnel record detailed statistics, including which region they are calling from, type of locality they reside in, age, employment status, citizenship, and other demographic information. Ardanyan says that 53% of users are female. A majority of callers, 41%, are 26 to 35 years old; 28% are 18 to 25; 28% are 36 to 50; less than 1% are under 18; and the rest are older than 50.²³²

Helpline personnel also track the content of the requests. Most of the callers were identified as victims of trafficking and were referred to relevant agencies for assistance. Other inquires came from those seeking to work abroad. Many callers asked about intermediaries who could assist them in finding a job abroad or possible fraud involved in using an intermediary.

According to Ardanyan, the major issue facing the program is securing funding to allow the national NGO to maintain the helpline: "As the funding from international aid agencies expires, this matter becomes crucial and a priority for continuing the hotline's operation."²³³

Cross-Sector Collaboration in Mobile Anti-Trafficking: Haiti

The 2010 Haitian earthquake displaced thousands of individuals into overcrowded and poorly regulated camps, where violence against women and children proliferated.²³⁴ Mobile phone service was one of the first infrastructures back up and running; thus, mobile phones played an important role in technological innovations for post-disaster efforts.²³⁵ Survivors Connect, a U.S.-based nonprofit, partnered with the NGO Fondation Espoir and Digicel, the largest cell provider in the Caribbean,²³⁶ to establish a phone number for individuals to report violence against women and children.²³⁷

The partnership that emerged between these three entities was intended to compensate for the absence of a centralized system for recording cases of violence. Victims, camp managers, and others can send a text to the Digicel phone number (#3803-0303) to report incidents of violence. Users can also submit reports via Twitter and send email to an application called Frontline SMS. This information is then routed to Survivors Connect, which maps cases of violence across Haiti using a program created by Ushahidi,²³⁸ a nonprofittechnology company that specializes in developing free and open-source software for information collection, visualization, and interactive mapping.²³⁹ The texting service and reports generated by Survivors Connect measure the magnitude of violence, track the epicenters of violent activities, and encourage reporting. Responses to reported cases are divided across Survivor Connect's referral network of professionals.²⁴⁰

The collaboration between Digicel and Survivors Connect stemmed from the rates of bulk SMS messaging offered by Digicel and its widespread use in Haiti. Both organizations cover text messaging and voice calls, while the mobile provider covers the hotline. Survivors Connect prepays the messaging service so that incoming messages are free for the sender. According to Aashika Damodar, founder and CEO of Survivors Connect, the number of users of both the hotline and messaging service varies from month to month but is generally in the hundreds, with reported cases encompassing both urgent and non-urgent issues.

Challenges for implementing this service can provide lessons for cross-sector collaboration in the U.S. and elsewhere. According to Damodar, issues in implementation included improving the technology behind the project, such as having adequate cell towers to produce strong signals in certain areas. Literacy also posed a challenge, so the SMS messaging service has had limited use.241 Survivors Connect initially developed a data map to geographically visualize problem areas; however, the map is no longer being updated. Manpower is essential, especially in the infancy stages of such projects. Currently the call data is being used for awareness and training purposes for other organizations and government institutions, as well as for legislative advocacy on women's rights.242

IX. SUMMARY OF KEY FINDINGS, FURTHER RESEARCH, AND GUIDING PRINCIPLES

This report forwards two key findings on the role of technology in domestic minor sex trafficking:

• Technology-facilitated trafficking is far more diffuse than initially thought, spreading across multiple online sites and digital platforms.

• Mobile devices and networks play an increasingly important role that can potentially transform the trafficking landscape.

These findings should be taken into consideration as policymakers, law enforcement, the private sector, and other stakeholders work to develop effective technology solutions to the sex trafficking of minors.

In particular, the centrality of mobile phones has major implications for counter-trafficking efforts and may represent a powerful new tool in identifying, tracking, and prosecuting traffickers as well as in other counter-trafficking efforts. The rapid proliferation of mobile technology has the potential to transform the human trafficking landscape. Mobile phones offer advantages of spontaneous, real-time communication and coordination, unbound by physical location, which are exploited by traffickers to extend the reach of their illicit activities. Traffickers are able to recruit, advertise, organize, and communicate primarily-or even exclusively-via mobile phone, effectively streamlining their activities and expanding their criminal networks.

In order to effectively develop countertrafficking initiatives using mobile technology, we must understand the scope and application of the mobile revolution around the world. Mobile technology has spread across the globe with incredible speed: no other technology in history, including the Internet, has achieved such rapid adoption rates, and already mobile penetration worldwide has reached 75%.²⁴³ Within this broad trend, however, there are variations in use and application depending on a number of demographic factors, which have important implications for the kind of counter-trafficking interventions that will be effective and appropriate.

In the United States, for instance, 85% of adults own a cellphone, and 45% own a smart phone,²⁴⁴ but access and use can vary widely by age, gender, ethnicity, geographic location, income, and education. In 2010, African-American and Latino populations were among the most active cellphone users, with adoption rates of about 87%, compared to 80% among white users, and also made use of a wider range of cellphone features.²⁴⁵ Youth are also avid users, with a wide range of activities including texting, taking photos and videos, and accessing the Internet: in 2010 they sent and received an average of 50 texts a day, about five times as many as adult users.

Such differences in access and use are also apparent at the international level. Total mobilecellular subscriptions reached almost 6 billion by the end of 2011, with developing countries accounting for more than 80% of the new subscriptions.²⁴⁶ Trends can vary significantly by region and country: in Thailand, for instance, there are nearly 80 million mobile phones in use in a country of just over 68 million.²⁴⁷ Compare this to a country like Nepal, which has 13.4 million mobile phones in use for a population of nearly 30 million,²⁴⁸ and it is clear that mobile adoption is by no means an even, linear process across the board.

With such variation in the diffusion and application of mobile technology, not all technological interventions will work across all groups, and the counter-trafficking community will need to tailor its approach to fit the specific technological profile of a target country or population. Strategies will need to be comprehensive, reflecting a new way of thinking across all sectors that takes into consideration the broader trend of technology-facilitated trafficking as well as the variations in use according to environment and other factors.

Further Research

This report has left a number of important questions about the role of technology in human trafficking unanswered. Understanding of technology-facilitated trafficking has improved dramatically over the last few years, but further research in the following areas is needed:

 Policy research directed toward mobile policy and FCC involvement to understand the role of government regulation and private mobile carriers.

• Focus on victims and survivors and their relationship with technology and mobile phones. Such research could aid the development of tools such as mobile SMS hotlines, mobile apps, video narratives, and games, which could aid vulnerable individuals by promoting awareness and behavioral change.

• The intersection of technology and labor trafficking and technology.

• The similarities and differences of technology's role in adult sex trafficking.

• The impact of digital activism, particularly by non-experts.

• Understanding of varying legislation around technology-facilitated trafficking.

• Utilizing more evidence-based methodologies can further investigate the exploratory themes that emerged in this report.

• International research will be important in deepening our understanding of how the trafficking ecosystem is developing across borders. Research on the United States compared to other countries will contribute to the development of comprehensive counter-trafficking strategies at an international level.

Guiding Principles

In CCLP's 2011 report, five guiding principles were developed for future technological interventions in human trafficking. These principles are listed below, and accompanied by adaptations to account for the contributions of this year's report in terms of the rise of mobile and the diffusion of technology-facilitated trafficking.

1. The ultimate beneficiaries of any technological intervention should be the victims and survivors of human trafficking.

Interventions should include a nuanced understanding of mobile technologies and should be fully attuned to potential unintended consequences in order to maximize the benefit and minimize the harm to trafficked persons and survivors.

2. Successful implementation of antitrafficking technologies requires cooperation among actors across government, nongovernmental, and private sectors, sharing information and communicating in a coordinated manner.

A comprehensive strategy is needed to address the diffusion of technology-facilitated trafficking. Addressing this problem requires representation and input from multiple sectors and perspectives, and diversification of the actors involved in discussions of technology and trafficking should be a priority. Anti-trafficking NGOs, victims and survivors, and groups with targeted expertise such as healthcare professionals, those working with at-risk youth, or migrant rights groups in the case of labor trafficking, can contribute valuable insights and perspective in the development of social and technical solutions.

At the policy level, a comprehensive solution will involve complementary and mutually reinforcing applications of both technological and conventional tools. Policymakers should be attentive to what technology can and cannot accomplish to address deeply entrenched problems.

3. Private-sector technology firms should recognize that their services and networks are being exploited by traffickers and take steps to innovate and develop anti-trafficking initiatives through their technologies and policies.

Mobile phone carriers, including pre-paid cellular carriers and mobile manufacturers, should acknowledge the extent to which their products and services are being misused for human trafficking. Leaders in the mobile sector should work with anti-trafficking experts to innovate and develop appropriate responses. Private mobile networks operating on spectrum licensed by the U.S. government may be incentivized to forge privatepublic anti-trafficking solutions. Such efforts on the part of industry need not be seen as burdensome, but rather should be viewed in light of the benefits that can come from discouraging violations of human rights on their networks and promoting digital safety and security.

4. Continuous involvement and research is necessary to ensure that tools are usercentric and refined over time to most effectively respond to shifts in technology and trafficking.

The diffusion of technology-facilitated trafficking demonstrates the fast-moving and everchanging nature of the technology ecosystem. Mobile technology is being adopted faster than any technology in human history, and researchers and developers working to create solutions should monitor the socio-technological landscape and develop responses that are agile and adaptable to constant change. Fixating on any particular channel or specific technology runs the risk of blinding us to the changing dynamics of digital networked technologies. As mobile phones continue to play a central role in technology-facilitated trafficking, we must be equally aware that mobile devices themselves will continue to change, with a corresponding shift in use and applications in the trafficking world. Responsiveness and adaptability are vital in a landscape where technology is rapidly and constantly evolving.

5. Technological interventions should account for the range of human rights potentially impacted by the use of advanced technologies.

As technology is built into counter-trafficking efforts, the inherent risks of using technology to identify and track the behavior and activity of individuals must be considered. Counter-trafficking solutions should be designed with careful oversight to ensure that the design and methods do not overstep rights to privacy, or unduly target certain groups. Particular care and attention to civil liberties and constitutional rights should be balanced with the need to respond to trafficked persons, and particularly children at risk, with immediate assistance.

As many of the major social issues of our time are increasingly mediated by technology, human trafficking is a valuable case study and barometer for future efforts that utilize technological solutions to intervene. As technology, and mobile in particular, continues to spread across the globe, policymakers and stakeholders will need to acknowledge the threats and embrace the positive opportunities of technology in matters of social change and human rights.

NOTES

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¹¹ Latonero, M. et al. (2011) *Human Trafficking Online: The role of social networking sites and online classifieds.* Los Angeles: USC Annenberg (hereinafter referred to as CCLP 2011 report), pp. 13–22.

¹³ Ibid., 39.

¹⁴ CCLP 2011 report, p. 10.

¹⁵ The first Trafficking Victims Protection Act (TVPA) was passed in 2000. The act was updated and reauthorized in 2003, 2005, and 2008. and was scheduled for reauthorization in 2011. As of the publishing of this report, the Trafficking Victims Protection Reauthorization Act (TVPRA) of 2011 has not been passed by Congress.

¹⁶ Under the 2008 TVPRA, "sex trafficking" is "the recruitment, harboring, transportation, provision, or obtaining of a person for the purpose

¹² Ibid., 23-30.

of a commercial sex act." This definition of sex trafficking is identical in the 2000 TVPA and 2008 TVPRA.

¹⁷ Victims of Trafficking and Violence Protection Act of 2000, 22 U.S.C. § 7102 (October 28, 2000), as amended.

¹⁸ Ibid., 14.

¹⁹ The President's Interagency Task Force on Human Trafficking has embarked on an initiative to provide a variety of online anti-trafficking tools, including online training modules for law enforcement, technology-based components for the National Human Trafficking Hotline, and technological capacity building for various intersecting industries. Annual Meeting of the President's Interagency Task Force to Monitor and Combat Trafficking in Persons (March 15, 2012) U.S. Department of State. Retrieved August 10, 2012, from www.state.gov/secretary/rm/ 2012/03/185905.htm.

²⁰ Mekong Club and Motherapp have partnered with the UN Inter-Agency Partnership on Human Trafficking to develop a mobile phone application that will address law enforcement's heavily documented inability to identify human trafficking victims due to language barriers. Boyd, Z. Personal communication with Matthew Friedman, July 18, 2012.

²¹ For example, both Microsoft Research and Google Ideas held conferences in July 2012 that highlighted the role of technology-facilitated sex trafficking.

²² Academic research teams such as the Crimes Against Children Research Center at University of New Hampshire, Scott Cunningham and Todd Kendall at Baylor University, and students such as Emily Kennedy at Carnegie Mellon University, are leading this exploratory field.

²³ See 2012 Trafficking in Persons Report. In addition, at the March 15, 2012, annual meeting of the President's Interagency Task Force to Monitor and Combat Trafficking in Persons, Raj Shah said that USAID has developed "a new counter-trafficking policy ... [that] prioritizes investments in technologies, like mapping platforms, mobile applications, and other innovations." See www.state.gov/secretary/rm/2012/03/185905.htm.

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Shively et al. (2012), p. 19. An interesting observation on reverse stings suggests that during traditional street reverse stings, johns post warnings in online forums, often with descriptions of the decoy and officers involved.

²⁷ The majority of victims are identified via tips from family members, community members, NGOs, or hotlines. Farrell et al. (2012), p. 43.

²⁸ Thirty percent of sex trafficking cases in states that lack trafficking legislation were identified via the Internet, as opposed to 20% of cases in states with basic legislation on human trafficking. Farley et al. (2012), p. 46.

²⁹ The Providing Resources, Officers, and Technology to Eradicate Cyber Threats to Our Children Act of 2008 (the "PROTECT Our Children Act") mandates that the department complete a threat assessment of the magnitude of technology-facilitated child exploitation.

³⁰ Department of Justice (2010) National Strategy for Child Exploitation Prevention and Interdiction. Washington, DC: U.S. Department of Justice. Retrieved from www.justice.gov/ psc/publications.html.

³¹ Ibid., 2–5.

32

"The [Providing Resources, Officers, and

Technology to Eradicate Cyber Threats to Our Children Act of 2008 (the 'PROTECT Our Children Act') also requires the Department to submit a report on the National Strategy (the 'National Strategy' or 'Report') to Congress every other year," Ibid., 1.

³³ Wang, H., Philpot, A., Hovy, E., Congxing, C., Latonero, M., & Metzler, D. (2012) *Data integration from open Internet sources to combat sex trafficking of minors.* Proceedings of the Association for Computing Machinery—Digital Government Conference, College Park, Maryland.

- ³⁴ boyd et al. (2011).
- ³⁵ Ibid., 1, 3.
- ³⁶ Ibid., 1.

37 The identified facets include Prevention and Education; Recruitment and Abduction of Victims; Transit, Housing and Everyday Control of Victims by "Pimps"; Retention of Victims by "Pimps"; Advertising and Selling of Victims; Searching for and Purchasing Victims by "Johns"; Exchange, Money Laundering; Money Underground Partnerships and Organized Crime Syndicates; Identification and Reporting of Victims and Perpetrators; Investigation of Illegal Activities; Rehabilitation and Recovery for Survivors; Prosecution of Perpetrators; Rehabilitation for and Control of Perpetrators; Political and Policy Activities; Anti-Trafficking Partnerships. Ibid., 3.

³⁸ The study was based on data from "a limited number of cases from the 76 agencies in 13 states that are represented in NIBRS." Finkelhor, D. and Ormrod, R. K., Crimes Against Children Resource Center (2004) Prostitution of juveniles: Patterns from NIBRS. *Juvenile Justice Bulletin*— NCJ203946 (pp. 1–12). Washington, DC: U.S. Government Printing Office. Retrieved from www.unh.edu/ccrc/pdf/jvq/CV67.pdf, p. 9.

³⁹ Mitchell, K. J., Finkelhor, D., & Wolak, J.,

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⁴⁴ According to Foot & Vanek, "The growth of anti-trafficking MANGOs (mobilizing/advocacy NGOs) across the U.S. is attributable [in part to] the growth of cause-promoting social media platforms such as Change.org, and issue-oriented uses of general social networking sites such as Facebook."

⁴⁵ Foot, K. & Vanek, J. (2012) Toward Constructive Engagement Between Local Law Enforcement and Mobilization and Advocacy Nongovernmental Organizations About Human Trafficking: Recommendations for Law Enforcement Executives. *Law Enforcement Executive Forum*, 12(1), 1–11.

⁴⁶ Stoll, J., Foot, K., & Edwards, W. K. (2012) Between Us and Them: Building Connectedness Within Civic Networks. *Proceedings of the ACM* 2012 Conference on Computer Supported Cooperative Work, 1, 237–40.

The three activities are raising basic awareness,

47

enabling connections, and reinforcing connections. The information communication technologies (ICTs) that support these activities include mobile phones, email, custom websites, and social media such as Twitter and Facebook.

⁴⁸ Stoll et al. (2012), p. 240.

⁴⁹ Ibid.

⁵⁰ Kunze, E. I. "Sex trafficking via the Internet: How international agreements address the problem and fail to go far enough." *The Journal of High Technology Law*, July 2010: 241+. Academic OneFile. Web. July 25, 2012. p. 253.

⁵¹ Asia Pacific Migration Network (2012) AP-Magnet Discussion Paper, based on an online discussion—Improving and Regulating Recruitment Practices in Asia and the Pacific, Bangkok: International Labour Organization. Morgan, G., Nolan, C., & Ediger, L. (2011) Step Up: Improving Migrant Worker Recruitment in Indonesia, San Francisco: Business for Social Responsibility, p. 19. Migration for Development (2011) E-discussion on: Migrant Workers and Recruitment Processes. Retrieved July 29, 2012, from www.migration4development.org/content/ e-discussion-migrant-workers-and-recruitmentprocesses.

⁵² Todres, J. (2012) The Private Sector's Pivotal Role in Combating Human Trafficking, California Law Review Circuit, 3: 190–208.

⁵³ Cal. Civ. Code § 1714.43; Cal. Tax Code § 19547.5(S.B. 657).

⁵⁴ Todres (2012).

⁵⁵ Obama, B. H. (September 25, 2012). *Remarks by the President to the Clinton Global Initiative.* Presentation at the Annual Meeting of the Clinton Global Initiative, New York, NY. Retrieved from White House website: http://www.whitehouse.gov/photos-andvideo/video/2012/09/25/president-obamaspeaks-clinton-global-initiative-annual-meeting #transcript.

- ⁵⁶ Ibid.
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⁵⁸ Trafficking Victims Protection Reauthorization
Act of 2011, H.R. 3589, 112th Cong. (2011).
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⁶¹ Wyden, R. (n.d.) Sex Trafficking. Retrieved from www.wyden.senate.gov/priorities/sex-trafficking.
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⁶⁴ Md. Code Ann. § 15-207 (S.B. 542).

⁶⁵ 13 V.S.A. § 2661 (H.B. 153).

⁶⁶ Tex. Civ. Prac. & Rem. Code § 125.045 (S.B. 1288).

⁶⁷ 13 V.S.A. § 2661 (S.B. 153).

⁶⁸ Wash. Rev. Code § 47.38.080 (S.B. 6330).

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⁷⁰ Haw. Rev. Stat. § 803-44 (H.B. 141).

⁷¹ Md. Code Ann., Cts. & Jud. Proc. § 10.402 (H.B. 345).

⁷² Or. Rev. Stat. Ann. § 2933.51 et. seq. (S.B. 235).

⁷³ California's CASE Act will also authorize electronic surveillance.

⁷⁴ Florida: Fla. Stat. § 847.0135. Also see, Georgia: Ga. Code Ann. § 16-12-100.2 ("other electronic device"); Kentucky: Ky. Rev. Stat. Ann. § 510.155 ("any other electronic means"); North Carolina: N.C. Gen. Stat. § 14-202.3 ("device capable of electronic data storage or transmission"); Texas: Tex. Penal Code § 33.021 ("over the Internet, by electronic mail or text message or other electronic message service or system, or through commercial online service").

⁷⁵ Va. Code Ann. § 18.2-374.3.

⁷⁶ See Maryland: Md. Crim. Code § 3-324;Minnesota: Minn. Stat. § 609.352.

⁷⁷ Mont. Code Ann. § 45-5-625.

⁷⁸ 18 Pa. Cons. Stat. § 6318.

⁷⁹ La. Rev. Stat. § 14:81.3.

⁸⁰ As Mitchell, Jones, Finkelhor, and Wolak (2011) have noted, the use of video communications in online sex crimes involving minors has increased, accounting for 27% of incidents in 2006.
⁸¹ Doe v. Jindal, No. 11-554-BAJ-SCR, 2012 U.S. Dist. LEXIS 19841 (M.D. La. Feb. 16, 2012).

⁸² La. Rev. Stat. § 15:542.

⁸³ Several of these websites, such as Facebook and MySpace, already prohibit sex offenders from using their platforms.

⁸⁴ La. Rev. Stat. § 15.542.1(D). A New Jersey state senator is offering a similar bill, S-2142, with an identical counterpart to be introduced in the state assembly.

⁸⁵ La. Rev. Stat. § 14:91.5.

⁸⁶ Ibid.

⁸⁷ Sex offenders fight for right to use Facebook (May 30, 2012) NBCNews.com. Retrieved from www.msnbc.msn.com/id/47619383/ns/technology _and_science-security/t/sex-offenders-fightright-use-facebook-linkedin/#.UD-owlQ7Y7C.

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⁸⁹ Cal. Civ. Code § 1714.43; Cal. Tax Code § 19547.5 (S.B. 657).

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⁹⁶ Miller, C. M. & Moskovitz, D. (September 1, 2012) Young prostitutes off the streets and online, MiamiHerald.com. Retrieved September 12, 2012, from www.miamiherald.com/2012/07/28/v-fullstory/2980491/young-prostitutes-off-thestreets.html. The article quotes this report's principal investigator, Mark Latonero: "The private sector capitalizes on the online visibility of Internet users by routinely collecting data on consumer behaviors for targeted marketing and advertising strategies, yet efforts to harness data and technological tools to address social problems lag behind."

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¹⁵⁷ "Who We Are," The A21 Campaign. Retrieved August 27, 2012, from www. thea21campaign.org/who-we-are.php.

¹⁵⁸ Retrieved October 19, 2012, from twitter.com/ IJMHQ.

¹⁵⁹ Retrieved October 19, 2012, from twitter.com/ dnafoundation.

¹⁶⁰ Retrieved October 19, 2012, from twitter.com/ NFS.

¹⁶¹ Retrieved October 19, 2012, from twitter.com/FreedomYouthCtr.

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¹⁶⁴ SomalyMam (July 24, 2012a) "My advocacy team received a report that 3 women were lured from Kampong Cham to Po Sen Chey district in Phnom Penh." Retrieved August 27, 2012, from twitter.com/SomalyMam/status/227769989 598437376.

¹⁶⁵ SomalyMam (July 24, 2012b) "Traffickers take advantage of their victims' trust and exploit their vulnerabilities" #humantrafficking #endslavery. Retrieved August 27, 2012, from twitter.com/ SomalyMam/status/227826548647006209.

¹⁶⁶ Site traffic data retrieved from www.quantcast. com on October 19, 2012. Quantcast estimates Adult Search's monthly unique visitors at 467,868, MyRedBook's at 243,360, and Cityvibe's at 138,402.

¹⁶⁷ These results were found using the site search function on Google on August 29, 2012. For example, to find how many results the phone number returned on Backpage, the following search was entered into Google: "702-***-***** site:backpage.com." With these search parameters, Google returned results for the phone number in quotes.

¹⁶⁸ Associated Press (June 26, 2012) *Justin Strom pleads guilty to sex trafficking*. Retrieved August 30, 2012, from www.wjla.com/articles/2012/06/ justin-strom-to-enter-plea-in-prostitution-ring-77307.html.

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¹⁷⁰ MocoSpace was described by *Forbes* as "the largest mobile gaming community in North America." Available at www.forbes.com/sites/ johngaudiosi/2011/12/20/new-report-detailsdemographics-of-mobile-gamers-buying-virtualgoods. One example of MocoSpace being used for DMST: Hunt, D. (November 4, 2011) Fort Worth man sentenced to 8 years for luring teen into prostitution, Star-Telegram. Retrieved August 30, 2012, from www.star-telegram. com/2011/11/03/3498599/fort-worth-mansentenced-to-8.html.

¹⁷¹ Anderson, N. (January 10, 2012) CSI: Xbox—how cops perform Xbox Live stakeouts and console searches, Ars Technica. Retrieved August 29, 2012, from arstechnica.com/tech-policy/2012/ 01/searches-and-xbox-live-stakeouts-how-copsinvestigate-consoles; and Shively, M., Kliorys, K., & Hunt, D. (2012) National Overview of Prostitution and Sex Trafficking Demand Reduction *Efforts*, Washington, DC: National Institute of Justice, p. 19.

¹⁷² This finding is based on public data provided by the North American Numbering Plan Administration (NANPA). It is important to note that the NANPA lists the telephone carrier originally associated with a particular phone number, and in most cases does not determine whether a phone number has been ported from one carrier to another. For more information visit www.nanpa.com.

¹⁷³ Musto, J. (2011) Institutionalizing Protection, Professionalizing Victim Management: Explorations of Multi-Professional Anti-Trafficking Efforts in the Netherlands and the United States. Doctoral dissertation (Los Angeles: University of California).

¹⁷⁴ Foot, K. (October 2011) "Challenges in Interorganizational and Multi-sector Collaboration Against Human Trafficking," *Proceedings of the Third Annual Interdisciplinary Conference on Human Trafficking*, University of Nebraska, Lincoln. See also Foot & Vanek (2012).

¹⁷⁵ Lindstrom, N. (2007) "Transnational Responses to Human Trafficking: The Politics of Anti-Trafficking in the Balkans," in H. Friman and S. Reich, eds., *Human Trafficking, Human Security, and the Balkans* (Pittsburgh: University of Pittsburgh Press).

¹⁷⁶ This study received Institutional Review Board approval.

¹⁷⁷ boyd et al. (2011).

¹⁷⁷ Singel, R. (December 18, 2010) "Craigslist Shuts Down International 'Adult Services' Sections," *Wired*. Available at www.wired.com/ business/2010/12/craigslist-adult-servicesinternational.

¹⁷⁹ This study was focused on U.S. governmental and NGO anti-trafficking interventions.

¹⁸⁰ Musto (2011).

¹⁸¹ In an interview following the closure of the adult section of Craigslist, John Palfrey, director

of the Berkman Center for Internet & Society at Harvard Law School, discussed the "whac-amole" problem, noting that "information will keep popping up online ... [S]trategically, you have to go to the root causes, and not just focus on the intermediaries, like the Phoenix or Craigslist, but directly on the wrongdoers." Woolhouse, M. (September 2010) Craigslist sexad ban doesn't end web listings, The Boston Globe, p. B.7. Retrieved from search.proquest.com/ docview/749807619?accountid=14953. Despite Palfrey's and others' recognition of the limitations of focusing on one site, the whac-a-mole approach persists. However, recent efforts advanced by Microsoft and Google to disrupt illegal and illicit activities on their networks suggest that new technological approaches to addressing human trafficking are under way.

¹⁸² Musto. Personal communication, June 29, 2012.
¹⁸³ Musto (2011). See also, Foot, K. & Toft, A. (2010) "Collaborating Against Human Trafficking," Proceedings of the Second Annual Interdisciplinary Conference on Human Trafficking, University of Nebraska, Lincoln, digitalcommons.unl.edu/humtrafconf2/20.

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¹⁸⁵ Musto. Personal communication, July 30, 2012.

¹⁸⁶ CCLP 2011 report.

¹⁸⁷ Musto. Personal communication, June 29, 2012.

¹⁸⁸ Musto. Field notes, 2012.

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¹⁹¹ Elliott, A. & Urry, J. (2010) *Mobile Lives*, New York, NY: Routledge.

¹⁹² The Smoking Gun (April 13, 2012) "Federal Agents Arrest Twitter Pimp for Sex Trafficking of Child," The Smoking Gun. Available at www.thesmokinggun.com/buster/twitter-pimparrested-758490.

¹⁹³ Doost, A. (February 28, 2011) "Human trafficking arrests made in North Texas," CBS DFW.
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¹⁹⁴ McMahon, P. (August 6, 2012) "Feds: Broward man recruited girl on Facebook, prostituted her," *Sun Sentinel*. Retrieved from articles. sun-sentinel.com/2012-08-06/news/fl-broward-child-prostitution-20120806_1_prostitution-fbiagents-broward-man.

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¹⁹⁶ Cunningham & Kendall (2009).

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²⁰⁰ Musto. Personal communication, July 9, 2012.

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²⁰² Gallagher, A. & Holmes, P. (2008) "Developing an Effective Criminal Justice Response to Human Trafficking: Lessons From the Front Line," *International Criminal Justice Review* 18: 318–43. See also, United Nations Office on Drugs and Crime (2004) Legislative Guides for the Implementation of United Nations Convention Against Transnational Organized Crime and the Protocols Thereto, Vienna, Austria.

²⁰³ Musto. Personal communication, June 29, 2012.

²⁰⁴ Musto. Personal communication, June 11, 2012.

²⁰⁵ Kunze, E. I. (2010). "Sex Trafficking Via the Internet: How international agreements address the problem and fail to go far enough," *Journal of High Technology*, X(2), 241–89. p. 242.

²⁰⁶ Microsoft News Center (July 18, 2012) Shedding Light on the Role of Technology in Child Sex Trafficking. Retrieved August 16, 2012, from www.microsoft.com/en-us/news/features/2012/ jul12/07-18childsextraffickingresearch.aspx.

²⁰⁷ Musto. Personal communication, June 27, 2012. ²⁰⁸ The term "burners" is slang for disposable phone; you can use it for illicit business and then "burn" it—or otherwise destroy it—to get rid of incriminating evidence. The absence of contracts and the low prices of disposable phones make "burning" them feasible.

²⁰⁹ Musto. Personal communication, June 27, 2012.

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Guided by Ambassador Walter Annenberg's belief that communication impacts all aspects of society and should be used in the public interest, the Center on Communication Leadership & Policy (CCLP) unites visionary ideals with impactful scholarship and practical applications that promote innovative solutions to policy and social concerns. Based at the Annenberg School for Communication and Journalism at the University of Southern California, CCLP is a policy center that conducts and disseminates research, organizes courses and fosters dialogue through programs, seminars, and symposia for scholars, students, policymakers, and working professionals. CCLP focuses its activities on issues covering The Role of Media in a Democracy, Communication Leadership, and Communication Technology and Social Change, which includes the Technology and Trafficking Initiative.

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