Next

Niklaus Julian Sempach

Generation

Social Media and the Sale of Illicit Substances

Nr. 11

EIZ Publishing

Author: Niklaus Julian Sempach
Publisher: EIZ Publishing (https://eizpublishing.ch)
Layout & Production: buch & netz (https://buchundnetz.com)
ISBN:
978-3-03805-749-9 (Print – Softcover)
978-3-03805-750-5 (PDF)
978-3-03805-751-2 (ePub)
DOI: https://doi.org/10.36862/eiz-ng011
Version: 1.00-20241115

This work is available in print and various digital formats in **OpenAccess**. Additional information is available at: https://eizpublishing.ch/next-generation/.

Next Generation

The “Next Generation” series offers a platform for young academics in all areas of law. The aim is to promote the visibility of special talents at an early stage. The volumes in this series are published in Open Access and can therefore be shared and distributed via social media and other channels. Each contribution undergoes a peer review process before it is published.

Social Media and the Sale of Illicit Substances

Niklaus Julian Sempach*

This work provides an exploratory overview of newly emerging digital drug markets as well as a critical discussion of criminal responsibility of platforms for hosting user-generated content under 47 U.S.C. § 230 in light of the newly enacted EU Digital Services Act.

Table of Contents

Table of Contents 1

Table of Abbreviations 2

Bibliography 4

I. Introduction 18

II. Key Definitions and Concepts 20
- A. The Geography of Illicit Retail Drug Markets 20
  - 1. Private Drug Markets 21
  - 2. Public Drug Markets 22
- B. Layers of the Internet 25

III. Social Media and App Mediated Drug Markets 27
- A. Methodology and Limitations 27
- B. General Observations 28
- C. Types of Social Media Drug Markets 32
  - 1. Public Digital Drug Markets 32
  - 2. Private Digital Markets 36
  - 3. Semi-Public Digital Markets 38
- D. Characterization of Market Participants 39
- E. Consequences of Social Media Drug Dealing 42
  - 1. Normalization of Drug Use 42
  - 2. Drift Potential 44

IV. Legal Approaches to Combat Social Media Drug Markets 47
- A. Section 230(c)(1) 48
  - 1. Historical Background 49
  - 2. Development through Judicial Interpretation 50

* Niklaus Julian Sempach, BLaw is an assistant to Prof. Dr. Iur. Christian Schwarzenegger's Chair of Criminal Law, Criminal Procedure and Criminology. He will complete his master's degree in March 2025 and then pursue his doctoral studies.

3. Exceptions under Section 230(e) 55
B. Causes for Concern 57
1. Statutory Goals: The Illusion of Self-regulation 58
2. On the Neutrality of Algorithmic Content Recommendation 60
C. Approaches for Reform 63
1. Brief Overview of Notice and Takedown Procedures under the DSA 64
2. Amending Section 230 with a Notice and Takedown Mechanism 67
3. Addressing the DSA's Weaknesses: a Few Remarks 68
V. Conclusion 70

Table of Abbreviations

App. No.	Application Number
Art.	Article
Cal. App.	California Appellate Reports
Cal. Ct. App.	California Court of Appeals
Cir.	Circuit of the United States Court of Appeals
cf.	compare
Cong. Rec.	Congressional Record
D.C.	District of Columbia
D. Conn	United States District Court for the District of Conneticut
DMCA	Digital Millennium Copyright Act
D.N.J.	United States District Court for the District of New Jersey
D. Or.	United States District Court for the District of Oregon
DSA	Digital Services Act
ECtHR	European Court of Human Rights
E.D. Pa.	United States District Court for the Eastern District of Pennsylvania
EU	European Union
e.g.	for example
F.	Federal Reporter
f.	and the following page
ff.	and the following pages
fn.	footnote
F. Supp	Federal Supplement
GDPR	General Data Protection Regulation
i.a.	inter alia

ibid.	in the same place
i.c.w.	in conjunction with
id.	the same work
LEA	Law Enforcement Agencies
M.D. Fla.	United States District Court for the Middle District of Florida
M.D. Tenn.	United States District Court for the Middle District of Tennessee
Media L. Rep. (BNA)	Media Law Reporter
N.C. Ct. App.	North Carolina Court of Appeals
n.d.	no date
N.D. Ala.	United States District Court for the Northern District of Alabama
N.D. Cal.	United States District Court for the Northern District of California
N.D. Ill.	United States District Court for the Northern District of Illinois
N.Y. Sup. Ct.	New York Supreme Court
OJ	Official Journal of the EU
Pub. L. No.	Public Law Number
rec.	recital
Rep.	representative
S. Ct.	Supreme Court Reporter
S. D. Fla.	United States District Court for the Southern District of Florida
S.D.N.Y	United States District Court for the Southern District of New York
Sec.	Section
UNODC	United Nations Office on Drugs and Crime
U.S.	United States Reports
U.S.C.	Code of Laws of the United States of America
W.D. Wash	United States District Court for the Western District of Washington
w.f.r.	with further references
w.r.t.	with reference to

Bibliography

Notice on citation: Unless otherwise noted, the following works are cited with the author's surname, its year of publication, and the page number.

Abbey, A., Scott, R. O., & Smith, M. J. (1993). Physical, subjective, and social availability: their relationship to alcohol consumption in rural and urban areas. *Addiction*, 88(4), 489 – 499.

Adejoh, S. O., Adisa, W. B., Onome, O., Anyimukwu, C., & Olorunlana, A. (2020). The Influence of Social Media on Illicit Drug Sale and Use among Undergraduates in Lagos, Nigeria. *Journal of Alcohol and Drug Education*, 64, 20 – 40.

Aggarwal, C. C. (2016). *Recommender Systems: The Textbook*. Cham: Springer International Publishing.

Albert, K., Armbruster, E., Brundige, E., Denning, E., Kim, K., Lee, L., Ruff, L., Simon, K., Yang, Y. (2020). FOSTA in Legal Context. *Columbia Human Rights Law Review*, 52(3), 1084 – 1158.

Aldridge, J., Measham, F., & Williams, L. (2011). *Illegal Leisure Revisited: Changing Patterns of Alcohol and Drug Use in Adolescents and Young Adults*. London: Routledge.

Aldridge, J., Stevens, A., & Barratt, M. J. (2018). Will growth in cryptomarket drug buying increase the harms of illicit drugs? *Addiction*, 113(5), 789 – 796.

Anderson, M., Gottfried, J., & Nolan, H. (2023). *Teens, Social Media and Technology 2023*. Washington, DC: Pew Research Center.

Andreas, P., & Wallman, J. (2009). Illicit markets and violence: what is the relationship? *Crime, Law and Social Change*, 52(3), 225 – 229.

Angelopoulos, C. (2020). Harmonizing Intermediary Copyright Liability in the EU: A Summary. In G. Frosio, *Oxford Handbook of Online Intermediary Liability*, 314 – 334. Oxford: Oxford University Press.

Angwin, J. (2023, February 20). *It's Time to Tear Up Big Tech's Get-Out-of-Jail-Free Card*. Retrieved July 4, 2024, from The New York Times: https://www.nytimes.com/2023/02/20/opinion/facebook-section-230-supreme-court.html

Baciu, A. (2018). Illegal drug use: An anthropological drug phenomenon. *Journal of the Anthropological Society of Serbia*, 53, 61 – 69.

Bakken, S. A. (2021). Drug dealers gone digital: using signalling theory to analyse criminal online personas and trust. *Global Crime*, 22(1), 51 – 73.

Bakken, S. A., & Demant, J. J. (2019). Sellers' risk perceptions in public and private social media drug markets. *International Journal of Drug Policy*, 73, 255 – 262.

Bakken, S. A., Oksanen, A., & Demant, J. (2022). Capital in illegal online drug markets: How digital capital changes the cultural environment of drug dealing. *Theoretical Criminology*, 27(3), 421 – 438.

Balkin, J. M. (2018). Free Speech Is a Triangle. *Columbia Law Review*, 118(7), 2011 – 2056.

Bambauer, D. E. (2014). Exposed. *Minnesota Law Review*, 98(6), 2025 – 2102.

Bancroft, A., & Scott Reid, P. (2016). Concepts of illicit drug quality among darknet market users: Purity, embodied experience, craft and chemical knowledge. *The International journal on drug policy*, 35, 42 – 49.

Bänziger, C., & Vogler, G. (1990). *Nur saubergekämmt sind wir frei – Text und Fotos zu Drogenszene und -politik in Zürich*. Zürich: Eco.

Barberá, P., Jost, J. T., Nagler, J., Tucker, J. A., & Bonneau, R. (2015). Tweeting From Left to Right: Is Online Political Communication More Than an Echo Chamber? *Psychological Science*, *26*(10), 1531 – 1542.

Barrat, M. J. (2015, January 15). *A discussion about dark net terminology*. Retrieved March 1, 2024, from Drugs in Digital Society by Dr Monica Barratt: https://monicabarratt.net/a-discussion-about-dark-net-terminology/

Barratt, M. J., Ferris, J. A., & Winstock, A. R. (2016). Safer scoring? Cryptomarkets, social supply and drug market violence. *International Journal of Drug Policy*, *35*, 24 – 31.

Barratt, M. J., Lamy, F. R., Engel, L., Davies, E., Puljevic, C., Ferris, J. A., & Winstock, A. R. (2022). Exploring Televend, an innovative combination of cryptomarket and messaging app technologies for trading prohibited drugs. *Drug and Alcohol Dependence*, *231*.

Barratt, M. J., Lenton, S., Maddox, A., & Allen, M. (2016). 'What if you live on top of a bakery and you like cakes?' – Drug use and harm trajectories before, during and after the emergence of Silk Road. *International Journal of Drug Policy*, *35*, 50 – 57.

Barthel, M., Faraldi, A., Robnett, S., Darpö, O., Lellouche Tordjman, K., Derow, R., & Ernst, C. (2023, October 31). *Winning Formulas for E-Commerce Growth*. Retrieved July 11, 2024, from BCG: https://www.bcg.com/publications/2023/winning-formulas-for-e-commerce-growth

Bathaee, Y. (2018). The Artificial Intelligence Black Box and the Failure of Intent and Causation. *Harvard Journal of Law & Technology*, *31*(2), 889 – 938.

Bergman, M. P. (2023). Assaulting the citadel of section 230 immunity: products liability, social media, and the youth mental health crisis. *Lewis & Clark Law Review*, *26*(4), 1159 – 1202.

Blankers, M., Van der Gouwe, D., Stegemann, L., & Smit-Rigter, L. (2021). Changes in Online Psychoactive Substance Trade via Telegram during the COVID-19 Pandemic. *European addiction research*, *27*(6), 469 – 474.

Bledsoe, J. (2023). *2024 eCommerce Size & Sales Forecast*. Retrieved July 11, 2024, from International Trade Administration: https://www.trade.gov/ecommerce-sales-size-forecast

Bleih, A. (2022, January 24). *Telegram: A Cybercriminal Hotspot – Illicit Items for Sale*. Retrieved March 12, 2024, from cybersixgill: https://cybersixgill.com/news/articles/telegram-a-cybercriminal-hotspot-illicit-items-for-sale

Bornstein, S. (2018). Antidiscriminatory Algorithms. *Alabama Law Review*, 519 – 572.

Brannon, V. C. (2019). *Liability for Content Hosts: An Overview of the Communication Decency Act's Section 230*. Washington DC: Congressional Research Service.

Brannon, V. C., & Holmes, E. N. (2024). *Section 230: An Overview*. Washington DC: Congressional Research Service.

Britto, D. G., Pinotti, P., & Sampaio, B. (2022). The Effect of Job Loss and Unemployment Insurance on Crime in Brazil. *Econometrica*, *90*(4), 1393 – 1423.

Buiten, M. C. (2021). The Digital Services Act: From Intermediary Liability to Platform Regulation. *Journal of Intellectual Property, Information Technology and E-Commerce Law*, *12*(5), 361 – 380.

Buri, I., & van Hoboken, J. (2021, October 28). *The Digital Services Act (DSA) proposal: a critical overview*. Retrieved July 8, 2024, from DSA Observatory: https://dsa-observatory.eu/wp-content/uploads/2021/11/Buri-Van-Hoboken-DSA-discussion-paper-Version-28_10_21.pdf

Burt, C. H. (2020). Self-Control and Crime: Beyond Gottfredson & Hirschi's Theory. *Annual Review of Criminology*, *3*, 43 – 73.

Buxton, J., & Bingham, T. (2015). *The Rise and Challenge of Dark Net Drug Markets*. Global Drug Policy Observatory.

Carome, P. J., Payton, J., & Jain, S. (1997). *Don't Sue the Messenger*. Retrieved April 23, 2024, from Intellectual Property: https://web.archive.org/web/20000605002732/https://www.ip-mag.com/carome.html

Castaño Díaz, C. (2013). Defining and characterizing the concept of Internet Meme. *Revista CES Psicología*, *6*, 82 – 104.

Childs, A., Bull, M., & Coomber, R. (2022). Beyond the dark web: navigating the risks of cannabis supply over the surface web. *Drugs: Education, Prevention and Policy*, *29*(4), 403 – 414.

Chuanbo, H., Minglei, Y., Bin, L., Xin, L., & Yanfang, Y. (2021). Identifying Illicit Drug Dealers on Instagram with Large-scale Multimodal Data Fusion. *CM Transactions on Intelligent Systems and Technology*, *12*(5).

Church, P., & Pehlivan, C. N. (2023). The Digital Services Act (DSA): A New Era for Online Harms and Intermediary Liability. *Global Privacy Law Review*, *4*(1), 53 – 59.

Cicchini, M. D. (2021). The New Absurdity Doctrine. *Penn State Law Review*, *125*(2), 353 – 388.

Cinelli, M., De Francisci Morales, G., Galeazzi, A., Quattrociocchi, W., & Starnini, M. (2021). The echo chamber effect on social media. *Proceedings of the National Academy of Sciences*, *118*(9).

Citron, D. K. (2023). How to Fix Section 230. *Boston University Law Review*, *103*(3), 713 – 761.

Citron, D. K., & Wittes, B. (2017). The Internet Will Not Break: Denying Bad Samaritans Sec. 230 Immunity. *Fordham Law Review*, *86*(2), 401 – 424.

Commission of the European Communities. (1998, November 18). *Proposal for a European Parliament and Council Directive on certain legal aspects of electronic commerce in the internal market*. Retrieved July 8, 2024, from EUR-Lex: https://eur-lex.europa.eu/resource.html?uri=cellar:28f57798-cdc4-4888-9963-709156ca799b.0008.04/DOC_1&format=PDF

Coomber, R., & Turnbull, P. (2007). Arenas of Drug Transactions: Adolescent Cannabis Transactions in England – Social Supply. *Journal of Drug Issues*, *37*(4), 845 – 865.

Coomber, R., Childs, A., Moyle, L., & Barratt, M. (2023). Social Media Applications and 'Surface Web' Mediated Supply of Illicit Drugs: Emergent and Established Market Risks and Contradictions. In M. Tzanetakis, & N. South, *Digital Transformations of Illicit Drug Markets: Reconfiguration and Continuity*, 15 – 28. Leeds: Emerald Publishing Limited.

Coomber, R., Moyle, L., & South, N. (2016). The normalisation of drug supply: The social supply of drugs as the "other side" of the history of normalisation. *Drugs: Education, Prevention and Policy*, *23*(3), 255 – 263.

Corbyn, Z. (2012, September 12). *Facebook experiment boosts US voter turnout*. Retrieved July 8, 2024, from Nature: https://www.nature.com/articles/nature.2012.11401

Crawford, G. E., Juhan, J.-L., Kempe-Mueller, S., Kirk, D. J., Kjølbye, L., Righini, E., Völcker, S., Leigh, B., Wan V., Smyth, A. (2023, March 14). *The Digital Services Act: Practical Implications for Online Services and Platforms*. Retrieved July 8, 2024, from Latham & Watkins LLP: https://www.latham.london/2023/03/digital-services-act-practical-implications-for-online-services-and-platforms/

Cyphert, A. B., & Martin, J. T. (2022). "A Change Is Gonna Come:" Developing a Liability Framework for Social Media Algorithmic Amplification. *UC Irvine Law Review*, *13*(1), 155 – 204.

de Streel, A., & Husovec, M. (2020). *The e-Commerce Directive as the cornerstone of the internal market: assessment and options for reform' – Study for the IMCO Committee of the European Parliament*. Luxembourg: European Parliament.

Demant, J., & Aagesen, K. M. (2022). *An analysis of drug dealing via social media – Background paper commissioned by the EMCDDA*. Copenhagen: European Monitoring Center for Drugs and Drug Addiction.

Demant, J., & Aagesen, K. M. (2024). *Dynamics of Social Media drug markets*. Retrieved March 5, 2024, from popNAD: https://nordicwelfare.org/popnad/en/artiklar/dynamics-of-social-media-drug-markets/

Demant, J., & Bakken, S. A. (2019). *Technology-facilitated drug dealing via social media in the Nordic countries*. Copenhagen: European Monitoring Centre for Drugs and Drug Addiction.

Demant, J., Bakken, S. A., Oksanen, A., & Gunnlaugsson, H. (2019). Drug dealing on Facebook, Snapchat and Instagram: A qualitative analysis of novel drug markets in the Nordic countries. *Drug and Alcohol Review*, 38(4), 377 – 385.

Dergacheva, D., & Katzenbach, C. (2024). Mandate to overblock? Understanding the impact of the European Union's Article 17 on copyright content moderation on YouTube. *Policy & Internet*, 16(2), 362 – 383.

Dewey, M., & Buzzetti, A. (2024). Easier, faster and safer: The social organization of drug dealing through encrypted messaging apps. *Sociology Compass*, 18(2).

Dumas, V. (2022). Enigma Machines: Deep Learning Algorithms as Information Content Providers under Section 230 of the Communications Decency Act. *Wisconsin Law Review*(6), 1581 – 1616.

Dyer, R. J. (2014). The Communication Decency Act Gone Wild: A Case for Renewing the Presumption against Preemption Comment. *Seattle University Law Review*, 37(2), 837 – 864.

Earp, B. D., Lewis, J., & Hart, C. L. (2021). Racial Justice Requires Ending the War on Drugs. *The American Journal of Bioethics*, 21(4), 4 – 19.

Eck, J. E. (1995). A general model of the geography of illicit retail marketplaces. *Crime Prevention Studies*, 4, 67 – 93.

Eg, R., Demirkol Tønnesen, Ö., & Tennfjord, M. K. (2023). A scoping review of personalized user experiences on social media: The interplay between algorithms and human factors. *Computers in Human Behavior Reports*, 9.

Ejbye-Ernst, P., Moeller, K., Liebst, L. S., Thomas, J., Sexton, M., & Lindegaard, M. R. (2023). "It's illegal to buy drugs from street dealers"–a video-based pre-post study of a behavioral intervention to displace dealers from an Amsterdam open-air drug market. *Journal of Experimental Criminology*.

Electronic Frontier Foundation. (2024, April 19). *CDA 230: The Most Important Law Protecting Internet Speech*. Retrieved July 19, 2024, from Electronic Frontier Foundation: https://web.archive.org/web/20211117073128/https://www.eff.org/issues/cda230 (cit. EFF (n.d.))

Engelberg, S. (2021, February 9). *Twenty-Six Words Created the Internet. What Will It Take to Save It?* Retrieved April 23, 2024, from ProPublica: https://www.propublica.org/article/nsu-section-230

Epstein, R., & Li, J. (2024). Can biased search results change people's opinions about anything at all? a close replication of the Search Engine Manipulation Effect (SEME). *PLOS ONE*, 19(3).

Epstein, R., & Robertson, R. E. (2015). The search engine manipulation effect (SEME) and its possible impact on the outcomes of elections. *Proceedings of the National Academy of Sciences*, 112(33), E4512 – E4521.

Ertemel, A. V., & Ahmad, A. (2016). The Role of Social Media Advertising in Consumer Buying Behavior. *International Journal of Commerce and Finance*, 2(1), 81 – 89.

European Commission. (2016, December 12). *Report assessing the implementation of the measures referred to in Article 25 of Directive 2011/93/EU of 13 December 2011 on combating the sexual abuse and sexual exploitation of children and child pornography*. Retrieved July 9, 2024, from EUR–Lex: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0872

European Commission. (2020). *Impact assessment of the Digital Services Act*. Brussels: European Commission, Directorate-General for Communications Networks, Content and Technology.

European Monitoring Centre for Drugs and Drug Addiction. (2021). *European Drug Report 2021: Trends and Developments*. (cit. EMCDDA (2021))

European Monitoring Centre for Drugs and Drug Addiction. (2023). *European Drug Report 2023: Trends and Developments*. (cit. EMCDDA (2023))

Europol. (2021). *The use of violence by organised crime groups, Europol Spotlight Report series*. Luxembourg: Publications Office of the European Union.

Finklea, K., & Sacco, L. N. (2022). *Policing Drug Trafficking on Social Media*. Washington DC: Congressional Research Service.

Flora, K. (2022). A Review of the Prevention of Drug Addiction: Specific Interventions, Effectiveness, and Important Topics. *Addiction & Health*, *14*(3), 288 – 295.

Friis Søgaard, T., Kolind, T., Birk Haller, M., & Hunt, G. (2019). Ring and bring drug services: Delivery dealing and the social life of a drug phone. *International Journal of Drug Policy*, *69*, 8 – 15.

Frosio, G. F. (2017). Reforming Intermediary Liability in the Platform Economy: A European Digital Single Market Strategy. *Northwestern University Law Review Online*, 18 – 46.

Frosio, G. F., & Geiger, C. (2023). Taking fundamental rights seriously in the Digital Services Act's platform liability regime. *European Law Journal*, *29*(1 – 2), 31 – 77.

Fuller, A., Vasek, M., Mariconti, E., & Johnson, S. D. (2024). Understanding and preventing the advertisement and sale of illicit drugs to young people through social media: A multidisciplinary scoping review. *Drug and Alcohol Review*, 56 – 74.

Garner, B. A. (2019). *Black's Law Dictionary* (Eleventh ed.). St. Paul: Thomson Reuters.

Gleason, S. L., Armistead, J. J., Bade, B. S., André Birotte, J., Huff, M. L., Ikuta, S. S., Kobayashi, L. E., McAuliffe, B. A., Simon, M. H., Yoon, A. (2022). *Manual of Model Criminal Jury Instructions for the District Courts of the Ninth Circuit*. Ninth Circuit Jury Instructions Committee. Retrieved July 19, 2024, from United States Courts for the Ninth Circuit: https://www.ce9.uscourts.gov/jury-instructions/model-criminal

Goldman, E. (2017). The Ten Most Important Section 230 Rulings. *Tulane Journal of Technology and Intellectual Property*, *20*, 1 – 10.

Goodman, E. P., & Whittington, R. (2019). *Section 230 of the Communications Decency Act and the Future of Online Speech*. Washington, DC: The German Marshall Fund of the United States.

Gottfredson, M. (2017, July 17). *Self-Control Theory and Crime*. Retrieved March 19, 2024, from Oxford Research Encyclopedias: https://oxfordre.com/criminology/display/10.1093/acrefore/9780190264079.001.0001/acrefore-9780190264079-e-252

Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Stanford: Stanford University Press.

Green, S. T. (2023). Our Children Are Dying: Halting the Section 230 Communication Decency Act Defense for Social Media Operators Soliciting Illegal Drugs to Minors. *Rutgers Computer and Technology Law Journal*, *50*(1), 37 – 89.

Griffin, K. W., & Botvin, G. J. (2010). Evidence-Based Interventions for Preventing Substance Use Disorders in Adolescents. *Child and Adolescent Psychiatric Clinics of North America*, 19(3), 505 – 526.

Grömping, M. (2014). 'Echo Chambers': Partisan Facebook Groups during the 2014 Thai Election. *Asia Pacific Media Educator*, 24, 39 – 59.

Groot, W., & Maassenvandenbrink, H. (2010). The effects of education on crime. *Applied Economics*, 42, 279 – 289.

Groshkova, T., Cunningham, A., Paul, G., & Roumen, S. (2022). *Digitally enabled drug markets: signs of diversification.* Emerald Publishing. Retrieved February 23, 2024, from https://www.emeraldgrouppublishing.com/opinion-and-blog/digitally-enabled-drug-markets-signs-diversification

Haider, T., & Shakib, S. (2018). A study on the influences of advertisement on consumer buying behavior. *Business Studies Journal*, 9(1).

Hatta, M. (2020). Deep web, dark web, dark net: A taxonomy of "hidden" Internet. *Annals of Business Administrative Science*, 19, 277 – 292.

Haupt, M. R., Cuomo, R., Li, J., Nali, M., & Mackey, T. K. (2022). The influence of social media affordances on drug dealer posting behavior across multiple social networking sites (SNS). *Computers in Human Behavior Reports*, 8.

Hayden, H. D. (2023). Traffickinghub: Reforming Section 230 of the Communications Decency Act to Address Pornhub's Exploitation of Sex Trafficking Victims. *University of Louisville Law Review*, 61(2), 413 – 454.

Henson, B., Swartz, K., & Reyns, B. W. (2017). #Respect: Applying Anderson's Code of the Street to the Online Context. *Deviant Behavior*, 38(7), 768 – 780.

Hjalmarsson, R., & Lochner, L. (2012). The Impact of Education on Crime: International Evidence. *CESifo Dice Report, Journal for Institutional Comparisons*, 10, 49 – 55.

Holland, B. J. (2020). Transnational Cybercrime: The Dark Web. In M. Khosrow-Pour, *Encyclopedia of Criminal Activities and the Deep Web*, 108–128. Hershey: IGI Global.

Holmes, E. N. (2023). *Liability for Algorithmic Recommendations.* Washington DC: Congressional Research Service.

Horowitz, S. J. (2007, Semptember 9). *Defusing a Google Bomb*. Retrieved July 9, 2024, from The Yale Law Journal: https://www.yalelawjournal.org/forum/defusing-a-google-bomb

House Report No. 115-572 (2018). Retrieved July 12, 2024, from U.S. Congress: https://www.congress.gov/congressional-report/115th-congress/house-report/572

Hoye, P. M. (2023). Down the Alt-Right Rabbit Hole: The Role of Social Media Platforms in the Radicalization of Domestic Right-Wing Terrorists. *Southern California Interdisciplinary Law Journal*, 33(1), 161 – 184.

Hughes, C. E., & Stevens, A. (2010). What Can We Learn From The Portuguese Decriminalization of Illicit Drugs? *The British Journal of Criminology*, 50(6), 999 – 1022.

Husovec, M. (2018). The Promises of Algorithmic Copyright Enforcement: Takedown or Staydown? Which Is Superior? And Why? *Columbia Journal of Law & the Arts*, 42(1), 53 – 84.

Husovec, M. (2023). Rising above liability: the digital services act as blueprint for the second generation of global internet rules. *Berkeley Technology Law Journal*, 38(3), 883 – 920.

Husovec, M., & Roche Laguna, I. (2022, July 5). *Digital Services Act: A Short Primer.* Retrieved July 8, 2024, from SSRN: https://ssrn.com/abstract=4153796

International Narcotics Control Board. (2011). *Report of the International Narcotics Control Board for 2010*. New York: United Nations Publications. (cit. INCB (2011))

International Narcotics Control Board. (2024). *Report of the International Narcotics Control Board for 2023*. Vienna: United Nations Publication. (cit. INCB (2024))

International Trade Administration. (2024). *Social Media Forecast*. Retrieved July 11, 2024, from International Trade Administration: https://www.trade.gov/ecommerce-frontline-social-media-forecast

Jawadi, F., Mallick, S. K., Idi Cheffou, A., & Augustine, A. (2021). Does higher unemployment lead to greater criminality? Revisiting the debate over the business cycle. *Journal of Economic Behavior & Organization*, 182, 448 – 471.

Johnson, A., & Castro, D. (2021, February 22). *Fact Checking the Critiques of Section 230: What Are the Real Problems?* Retrieved April 30, 2024, from Information Technology and Innovation Foundation: https://itif.org/publications/2021/02/22/fact-checking-critiques-section-230-what-are-real-problems/

Jones, P. (2023, December 14). *Drug misuse in England and Wales: year ending March 2023 – An overview of the extent and trends of illicit drug use. Data are from the Crime Survey for England and Wales.* Retrieved March 28, 2024, from Office for National Statistics: https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/articles/drugmisuseinenglandandwales/yearendingmarch2023

Keeton, P. W., Dobbs, D. B., & Keeton, R. E. (1984). *Prosser and Keeton on the Law of Torts* (5th ed.). St. Paul: West Publishing Co.

Kemp, S. (2024). *Digital 2024: Global Overview Report*. Retrieved March 4, 2024, from DATAREPORTAL: https://datareportal.com/reports/digital-2024-global-overview-report

Kerr, T., Small, W., Johnston, C., Li, K., Montaner, J. S. G., & Wood, E. (2008). Characteristics of injection drug users who participate in drug dealing: implications for drug policy. *Journal of psychoactive drugs*, 40(2), 147 – 152.

Kettering, S., Bustillo, H., Mackey, T. K., McMann, T., Nali, M., & Maroulis, J. (2023). *Social Media, Fentanyl & Illegal Drug Sales.* Denver: Colorado Department of Law.

Kim, J., & Song, H. (2016). Celebrity's self-disclosure on Twitter and parasocial relationships: A mediating role of social presence. *Computers in Human Behavior*, 62, 570 – 577.

Kim, P. T. (2017). Data-Driven Discrimination at Work. *William & Mary Law Review*, 58(3), 857 – 936.

Kim, P. T., & Bodie, M. T. (2021). Artificial Intelligence and the Challenges of Workplace Discrimination and Privacy Articles from the 72nd Annual Conference on Labor at the Center for Labor and Employment Law, NYU School of Law. *ABA Journal of Labor and Employment Law*, 35(2), 289 – 316.

Kim, S. A. (2017). Social Media Algorithms: Why You See What You See. *Georgetown Law Technology Review*, 2(1), 147 – 154.

Kosseff, J. (2019). *The Twenty-Six Words That Created the Internet*. Ithaca: Cornell University Press.

Kozinets, R. V. (2015). Netnography. In R. Mansell, & P. Hwa Ang, *The International Encyclopedia of Digital Communication and Society*, 291 – 299. Chichester: John Wiley & Sons.

Kramer, A. D., Guillory, J. E., & Hancock, J. T. (2014). Experimental evidence of massive-scale emotional contagion through social networks. *Proceedings of the National Academy of Sciences*, 111(24), 8788 – 8790.

Larkin, J. E. (2010). Criminal and Civil Liability for User Generated Content: Craigslist, a Case Study. *Journal of Technology Law & Policy*, 15(1), 85 – 112.

Ligget, R., Ree Lee, J., Roddy, A. L., & Wallin, M. A. (2020). The Dark Web as a Platform for Crime: An Exploration of Illicit Drug, Firearm, CSAM, and Cybercrime Markets. In T. Holt, & A. Bossler, *The Palgrave Handbook of International Cybercrime and Cyberdeviance*, 1–28. Cham: Springer International Publishing.

Lisea, T. (2023). Lemmon Leads the Way to Algorithm Liability: Navigating the Internet Immunity Labyrinth. *Pepperdine Law Review*, 50(4), 785 – 822.

Liu, Y., Yildirim, P., & Zhang, J. Z. (2021, November 23). *Implications of Revenue Models and Technology for Content Moderation Strategies*. Retrieved May 3, 2024, from SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3969938

Lops, P., de Gemmis, M., & Semeraro, G. (2011). Content-based Recommender Systems: State of the Art and Trends. In F. Ricci, L. Rokach, B. Shapira, & P. B. Kantor, *Recommender Systems Handbook*, 73 – 105. Boston: Springer US.

Lum, C. (2008). The Geography of Drug Activity and Violence: Analyzing Spatial Relationships of Non-Homogenous Crime Event Types. *Substance Use & Misuse*, 43(2), 179 – 201.

Luu, C. (2020, August 5). *How to Meme What You Say*. Retrieved March 31, 2024, from Jstor Daily: https://daily.jstor.org/how-to-meme-what-you-say/

Lynton, J. S. (1995). *Ballentine's Legal Dictionary and Thesaurus*. Albany: Delmar Publishers.

Maaß, S., Wortelker, J., & Rott, A. (2024). Evaluating the regulation of social media: An empirical study of the German NetzDG and Facebook. *Telecommunications Policy*, 48(5).

Magnolini, R., Schneider, M., Schori, D., Trachsel, D., & Bruggmann, P. (2023). Substances from unregulated drug markets – A retrospective data analysis of customer-provided samples from a decade of drug checking service in Zurich (Switzerland). *International Journal of Drug Policy*, 114.

Manning, J. (2003). The Absurdity Doctrine. *Harvard Law Review*, 116(8), 2387 – 2486.

Manning, J., Villareal, M., & Lloyd, J. (2024, May 23). *Estimated Revenue Increased for Internet-Based Services, Lagged for Some Traditional Media*. Retrieved July 1, 2024, from United States Census Bureau: https://www.census.gov/library/stories/2024/05/internet-growth.html

Markoff, J. (2005). *What the dormouse said: how the sixties counterculture shaped the personal computer industry*. New York: Viking.

Marks, W., & Nemer, D. (2022, April 6). *Telegram's Embrace of Contradiction*. Retrieved March 12, 2024, from Lawfare: https://www.lawfaremedia.org/article/telegrams-embrace-contradiction

Martin, J. (2014). *Drugs on the Dark Net: How Cryptomarkets Are Transforming the Global Trade in Illicit Drugs*. London: Palgrave Macmillan.

Matassi, M., Boczkowski, P. J., & Mitchelstein, E. (2019). Domesticating WhatsApp: Family, friends, work, and study in everyday communication. *New Media & Society*, 21(10), 2183 – 2200.

May, T., & Hough, M. (2004). Drug markets and distribution systems. *Addiction Research and Theory*, 12(6), 549 – 563.

McClure, K. (2022). A Case for Protecting Youth from the Harmful Mental Effects of Social Media. *Chapman Law Review*, 26(1), 325 – 360.

McDermott, M. E. (2023). Mitigating Misinformation on Social Media Platforms: Treating Section 230 of the Communications Decency Act as a Quid Pro Quo Benefit. *Connecticut Law Review Online*, 55, 1 – 26.

McHugh, D. (2024, April 1). *Germany has legalized possession of small amounts of cannabis. Not everyone is mellow about that.* Retrieved April 19, 2024, from Associated Press: https://apnews.com/article/cannabis-marijuana-legalization-decriminalization-germany-26e6a5ec254cfa69d063ec352036dfd8

McPeak, A. (2021). Platform Immunity Redefined. *William & Mary Law Review*, 62(5), 1557 – 1614.

Meaker, M. (2019, March 26). *Inside the giant German protest trying to bring down Article 13*. Retrieved July 8, 2024, from Wired: https://www.wired.com/story/article-13-protests/

Measham, F., & Shiner, M. (2009). The legacy of 'normalisation': The role of classical and contemporary criminological theory in understanding young people's drug use. *International Journal of Drug Policy*, 20(6), 502 – 508.

Mendenica, O., & Wahab, K. (2007). Does liability enhance credibility: lessons from the DMCA applies to online defamation. *Cardozo Arts and Entertainment Law Journal*, 25, 237 – 269.

Meta. (2023, November 30). *Restricted goods and services*. Retrieved May 3, 2024, from Meta Transparency Center: https://transparency.meta.com/en-gb/policies/community-standards/regulated-goods/

Meyers, C. (2023). *Drug Legalization : A Philosophical Analysis*. Cham: Springer International Publishing.

Miech, R. A., Johnston, L. D., Patrick, M. E., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2023). *Monitoring the Future National Survey Results on Drug Use, 1975–2022: Secondary school students*. Ann Arbor: Institute for Social Research, University of Michigan.

Moeller, K. (2022). Hybrid Governance in Online Drug Distribution. *Contemporary Drug Problems*, 491 – 504.

Moeller, K., Munksgaard, R., & Demant, J. (2021). Illicit drug prices and quantity discounts: A comparison between a cryptomarket, social media, and police data. *International Journal of Drug Policy*, 91.

Mongan, D., Killeen, N., Evans, D., Millar, S., Keenan, E., & Galvin, B. (2022). *European Web Survey on Drugs 2021: Irish Results*. Dublin: Health Research Board.

Morini, V., Pollacci, L., & Rossetti, G. (2021). Toward a Standard Approach for Echo Chamber Detection: Reddit Case Study. *Applied Sciences*, 11.

Moyle, L., Childs, A., Coomber, R., & Barratt, M. J. (2019). #Drugsforsale: An exploration of the use of social media and encrypted messaging apps to supply and access drugs. *International Journal of Drug Policy*, 63, 101 – 110.

Mulry, M. H. (2008). Coverage Error. In P. Lavrakas, *Encyclopedia of Survey Research Methods*, 162 – 166. Thousand Oaks: SAGE Publications.

Muravska, J., Hughes, W., & Pyman, M. (2011). *Organised crime, corruption, and the vulnerability of defence and security forces*. London: Transparency International UK.

Narayanan, A. (2023). Understanding Social Media Recommendation Algorithms. *Knight First Amendment Institute*, 23(1).

National Harm Reduction Coalition. (2020). *Principles of Harm Reduction*. Retrieved April 18, 2024, from National Harm Reduction Coalition: https://harmreduction.org/about-us/principles-of-harm-reduction/

Nordemann, J. B. (2020). *The functioning of the internal market for digital services: responsibilities and duties of care of providers of digital services' – Study for the IMCO Committee of the European Parliament*. Luxembourg: European Parliament.

O'Brien, D., & Malcom, J. (2018, June 12). *70+ Internet Luminaries Ring the Alarm on EU Copyright Filtering Proposal*. Retrieved July 9, 2024, from Electronic Frontier Foundation: https://www.eff.org/deeplinks/2018/06/internet-luminaries-ring-alarm-eu-copyright-filtering-proposal

Oksanen, A., Miller, B., Savolainen, I., Sirola, A., Demant, J., Kaakinen, M., & Zych, I. (2020). Social Media and Access to Drugs Online: A Nationwide Study in the United States and Spain among Adolescents and Young Adults. *The European Journal of Psychology Applied to Legal Context*, 13(1), 29 – 36.

Opp, K. D. (2020). *Analytical Criminology. Integrating Explanations of Crime and Deviant Behavior.* London and New York: Routledge.

Oranburg, S. (2022). Social Media and Democracy after the Capitol Riot, or, a Cautionary Tale of the Giant Goldfish Social Media Platforms and Free Expression. *Mercer Law Review*, 73(2), 591 – 613.

Ortiz-Ospina, E. (2019, September 18). *The rise of social media*. Retrieved July 1, 2024, from Our World in Data: https://ourworldindata.org/rise-of-social-media

Parker, H. J., Aldridge, J., & Measham, F. (1998). *Illegal leisure: the normalization of adolescent recreational drug use*. London: Routledge.

Parker, H., Williams, L., & Aldridge, J. (2002). The Normalization of 'Sensible' Recreational Drug Use: Further Evidence from the North West England Longitudinal Study. *Sociology*, 36(4), 941 – 964.

Parker, J. (2024, April 1). *Cannabis partially decriminalised in Germany*. Retrieved April 19, 2024, from BBC: https://www.bbc.com/news/world-europe-68674813

Peguera, M. (2009). The DMCA Safe Harbors and Their European Counterparts: A Comparative Analysis of Some Common Problems. *Columbia Journal of Law and the Arts*, 32(4), 481 – 512.

Pennay, A., & Measham, F. (2016). The normalisation thesis – 20 years later. *Drugs: Education, Prevention and Policy*, 23(3), 187 – 189.

Pergolizzi Jr, J. V., LeQuang, J. A., Taylor Jr, R., & Raffa, R. B. (2017). The "Darknet": The new street for street drugs. *Journal of Clinical Pharmacy and Therapeutics*, 42(6), 790 – 792.

Petersen, M. A., Petersen, I. L., Poulsen, C., & Nørgaard, L. S. (2021). #studydrugs–Persuasive posting on Instagram. *International Journal of Drug Policy*, 95.

Pew Research Center. (2024, January 31). *Internet, Broadband Fact Sheet*. Retrieved July 1, 2024, from Pew Research Center: https://www.pewresearch.org/internet/fact-sheet/internet-broadband/

Pincus, W. (1999). The Internet Paradox: Libel, Slander and the First Amendment in Cyberspace. *2 Green Bag 2d*, 2(3), 279 – 189.

Pohlmann, J., Barbaresi, A., & Leinen, P. (2023). Platform regulation and "overblocking" – The NetzDG discourse in Germany. *Communications*, 48(3), 319 – 419.

Polański, P. P. (2018). Rethinking the notion of hosting in the aftermath of Delfi: Shifting from liability to responsibility? *Computer Law & Security Review*, 34(4), 870 – 880.

Project Syndicate (2024, July 9). *Joseph E. Stiglitz Says More…* Retrieved July 15, 2024, from Project Syndicate: https://www.project-syndicate.org/onpoint/an-interview-with-joseph-stigtliz-on-inflation-freedom-neoliberalism-2024-07

Protecting Kids Online: Testimony from a Facebook Whistleblower, Senate Hearing 117-769 (Subcommittee on Consumer Protection, Product Safety, and Data Security October 5, 2021).

Quattrociocchi, W., Scala, A., & Sunstein, C. (2016). Echo Chambers on Facebook. *SSRN Electronic Journal*.

Radbod, S. T. (2010). Craigslist – A Case for Criminal Liability for Online Service Providers? Part IV: Cyberlaw: Section A: Notes. *Berkeley Technology Law Journal*, 25(1), 597 – 616.

Rassameeroj, I., & Wu, S. F. (2019). Reverse Engineering of Content Delivery Algorithms for Social Media Systems. *2019 Sixth International Conference on Social Networks Analysis, Management and Security (SNAMS)*, 196 – 203.

Reddit Inc. (2024). *Reddit Content Policy*. Retrieved May 3, 2024, from Reddit: https://www.redditinc.com/policies/content-policy

Reed, C., Kennedy, E., & Silva, S. (2016). Responsibility, Autonomy and Accountability: Legal Liability for Machine Learning. *Queen Mary School of Law Legal Studies Research Paper No. 243/2016*.

Reinikainen, H., Munnukka, J., & Maity, D. (2020). 'You really are a great big sister' – parasocial relationships, credibility, and the moderating role of audience comments in influencer marketing. *Journal of Marketing Management*, 36(3 – 4), 279 – 298.

Reuter, P. (2009). Systemic violence in drug markets. *Crime, Law and Social Change*, 52(3), 275 – 284.

Reynders, D. (2021, October 7). *Countering illegal hate speech online – 6th evaluation of the Code of Conduct*. Retrieved July 9, 2024, from European Commission: https://ec.europa.eu/commission/presscorner/detail/en/ip_21_5082

Ritter, A. (2006). Studying illicit drug markets: Disciplinary contributions. *International Journal of Drug Policy*, 17(6), 453 – 463.

Rolando, S., & Beccaria, F. (2019). "The junkie abuses, the psychonaut learns": a qualitative analysis of an online drug forum community. *Drugs and Alcohol Today*, 19(4), 282 – 294.

Roter, M. (2017). With Great Power Comes Great Responsibility: Imposing a Duty to Take down Terrorist Incitement on Social Media. *Hofstra Law Review*, 45(4), 1379 – 1414.

Roth, E. (2023, July 10). *Social networks can keep storing EU user data in the US under new agreement*. Retrieved April 19, 2024, from The Verge: https://www.theverge.com/2023/7/10/23789695/eu-us-transatlantic-data-sharing-agreement

Roth, S. M. (2021). Data Snatchers: Analyzing TikTok's Collection of Children's Data and Its Compliance with Modern Data Privacy Regulations. *Journal of High Technology Law*, 22(1), 1 – 51.

Rucker, L. H. (2023). The End of an Era: The Uncertain Future of Section 230 Immunity for Social Media Platforms. *Vanderbilt Journal of Entertainment & Technology Law*, 26(1), 241 – 273.

Rupa, A. P., & Gangopadhyay, A. (2020). Multi-modal Deep Learning Based Fusion Approach to Detect Illicit Retail Networks from Social Media. *2020 International Conference on Computational Science and Computational Intelligence (CSCI)*, 238 – 243.

Rutherford, B. N., Sun, T., Johnson, B., Co, S., Lim, T. L., Lim, C. C., Chiu, V., Leung, J., Stjepanovic, D., Connor, J. P., Chan, G. C. (2021). Getting high for likes: Exploring cannabis-related content on TikTok. *Drug and Alcohol Review*, 1119 – 1125.

Sadowski, J. (2019). When data is capital: Datafication, accumulation, and extraction. *Big Data & Society*, 6(1).

Saxe, L., Kadushin, C., Beveridge, A., Livert, D., Tighe, E., Rindskopf, D., Ford, J., Brodsky, A. (2001). The Visibility of Illicit Drugs: Implications for Community-Based Drug Control Strategies. *American Journal of Public Health*, 91(12), 1987 – 1994.

Schafer, J. B., Konstan, J. A., & Riedl, J. (2001). E-Commerce Recommendation Applications. *Data Mining and Knowledge Discovery*, 5(1), 115 – 153.

Scheurman, T. (2022). Comparing Social Media Content Regulation in the US and the EU: How the US Can Move Forward with Section 230 to Bolster Social Media Users' Freedom of Expression. *San Diego International Law Journal*, 23(2), 413 – 455.

Schlag, A. K. (2020). Percentages of problem drug use and their implications for policy making: A review of the literature. *Drug Science, Policy and Law*, 6.

Schuetze, C. F. (2024, February 23). *German Lawmakers Move Closer to Legalizing Marijuana*. Retrieved April 19, 2024, from The New York Times: https://www.nytimes.com/2024/02/23/world/europe/germany-marijuana-pot-cannabis-legalization.html

Schulze, E. (2019, March 25). *Thousands protest against controversial EU internet law claiming it will enable online censorship*. Retrieved July 8, 2024, from CNBC: https://www.cnbc.com/2019/03/25/protesters-in-germany-say-new-eu-law-will-enable-online-censorship.html

Semple, S. J., Strathdee, S. A., Volkmann, T., Zians, J., & Patterson, T. L. (2011). "High on My Own Supply": Correlates of Drug Dealing among Heterosexually Identified Methamphetamine Users. *The American Journal on Addictions*, 20(6), 516 – 524.

Senate Report No. 104-230 (1996). Retrieved July 8, 2024, from U.S. Congress: https://www.congress.gov/congressional-report/104th-congress/senate-report/230/1

Smith, M. D., & Van Alstyne, M. (2021, August 12). *It's Time to Update Section 230*. Retrieved May 3, 2024, from Harvard Business Review: https://hbr.org/2021/08/its-time-to-update-section-230

Snap. Inc. (2024, January). *Community Guidelines*. Retrieved May 3, 2024, from Snapchat Privacy and Safety Hub: https://values.snap.com/en-GB/privacy/transparency/community-guidelines

Snyder, K., & Aditham, K. (2024, March 28). *35 E-Commerce Statistics of 2024*. Retrieved July 11, 2024, from Forbes Advisor: https://www.forbes.com/advisor/business/ecommerce-statistics/

Soussan, C., & Kjellgren, A. (2014). Harm reduction and knowledge exchange-a qualitative analysis of drug-related Internet discussion forums. *Harm reduction journal*, 11.

Stern, S. (2009). Fair Housing and Online Free Speech Collide in Fair Housing Council of San Fernando Valley v. Roommates.com, LLC. *DePaul Law Review*, 58(2), 559 – 590.

Stevens, A., Hughes, C. E., Hulme, S., & Cassidy, R. (2019). Depenalization, diversion and decriminalization: A realist review and programme theory of alternatives to criminalization for simple drug possession. *European Journal of Criminology*, 19(1), 29 – 54.

Taylor, M., & Potter, G. R. (2013). From "Social Supply" to "Real Dealing": Drift, Friendship, and Trust in Drug-Dealing Careers. *Journal of Drug Issues*, 43(4), 392 – 406.

Tenzer, L. Y., & Margulis, H. (2022). A 180 on Section 230: State Efforts to Erode Social Media Immunity. *Pepperdine Law Review*, 49, 49 – 79.

TikTok. (2024, April 17). *Regulated Goods and Commercial Activities*. Retrieved May 3, 2024, from TikTok Community Guidelines: https://www.tiktok.com/community-guidelines/en/regulated-commercial-activities?cgversion=2024H1update

TikTok: How Congress Can Safeguard American Data Privacy and Protect Children from Online Harms, House Hearing 118-13 (House Committee on Energy and Commerce 2023).

Tremble, C. (2017). Wild Westworld: Section 230 of the CDA and Social Networks' Use of Machine-Learning Algorithms. *Fordham Law Review*, 86(2), 825 – 890.

U.S Department of Justice. (2020, February 19). *Attorney General William P. Barr Delivers Opening Remarks at the DOJ Workshop on Section 230: Nurturing Innovation or Fostering Unaccountability*? Retrieved May 3, 2024, from U.S Department of Justice: https://www.justice.gov/opa/speech/attorney-general-william-p-barr-delivers-opening-remarks-doj-workshop-section-230 (cit. DOJ (2020))

Unger, W. (2021). How the Poor Data Privacy Regime Contributes to Misinformation Spread and Democratic Erosion. *Science and Technology Law Review*, 22(2), 308 – 345.

United Nations. (1988, December 20). 19. *United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances*. Retrieved July 8, 2024, from United Nations Treaty Collection: https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=VI-19&chapter=6&clang=_en

United Nations Office on Drugs and Crime. (2022). *World Drug Report 2022*. Vienna: United Nations Publication. (cit. UNODC (2022))

United Nations Office on Drugs and Crime. (2023). *World Drug Report 2023*. Vienna: United Nations Publication. (cit. UNODC (2023))

United States Attorney's Office District of New Hampshire. (2020, May 21). *Frequently Used Federal Drug Statutes*. Retrieved April 30, 2024, from United States Department of Justice: https://www.justice.gov/usao-nh/frequently-used-federal-drug-statutes (cit. Attorney's Office New Hampshire (2020))

Urban, J. M., Karaganis, J., & Schofield, B. (2017, March 22). *Notice and Takedown in Everyday Practice*. Retrieved July 9, 2024, from SSRN: https://ssrn.com/abstract=2755628

Van der Sanden, R., Wilkins, C., & Rychert, M. (2024). "I straight up criminalized myself on messenger": law enforcement risk management among people who buy and sell drugs on social media. *Drugs: Education, Prevention and Policy*, 31(3), 378 – 390.

Van der Sanden, R., Wilkins, C., Romeo, J. S., Rychert, M., & Barratt, M. J. (2021). Predictors of using social media to purchase drugs in New Zealand: Findings from a large-scale online survey. *International Journal of Drug Policy*, 98.

Van der Sanden, R., Wilkins, C., Rychert, M., & Barratt, M. J. (2022). 'Choice' of social media platform or encrypted messaging app to buy and sell illegal drugs. *International Journal of Drug Policy*, 108. (cit. Van der Sanden, et al. Choice (2022))

Van der Sanden, R., Wilkins, C., Rychert, M., & Barratt, M. J. (2022). The Use of Discord Servers to Buy and Sell Drugs. *Contemporary Drug Problems*, 49(4), 453 – 477. (cit. Van der Sanden, et al. Discord (2022))

Van der Sanden, R., Wilkins, C., Rychert, M., & Barratt, M. J. (2023). Social Supply and the Potential for Harm Reduction in Social Media Drug Markets. *Contemporary Drug Problems*, 50(3), 381 – 401.

Wagner, B., & Janssen, H. (2021, January 4). *A first impression of regulatory powers in the Digital Services Act*. Retrieved July 9, 2024, from https://verfassungsblog.de/regulatory-powers-dsa/

Wallberg, K. (2017). Notice and takedown of counterfeit goods in the Digital Single Market: a balancing of fundamental rights. *Journal of Intellectual Property Law & Practice*, 12(11), 922 – 936.

Wax, P. M. (2002). Just a Click Away: Recreational Drug Web Sites on the Internet. *Pediatrics*, 109(6).

Weaver, R. L. (2022). Social Media, Section 230, and Free Expression. *Mercer Law Review*, 73(2), 615 – 633.

Wenger, K. A. (2018, July 5). *Kritiker fürchteten das Ende des Internets – nun will das EU-Parlament die Urheberrechtsreform nochmals überarbeiten.* Retrieved July 8, 2024, from NZZ: https://www.nzz.ch/international/urheberrechtsreform-kritiker-fuerchten-das-ende-des-internets-ld.1400960

Wilman, F. (2021). The EU's system of knowledge-based liability. *Journal of Intellectual Property, Information Technology and E-Commerce Law*, 12(3), 317 – 341.

Wilman, F. (2022, December 16). *The Digital Services Act (DSA) – An Overview.* Retrieved July 5, 2024, from SSRN: https://ssrn.com/abstract=4304586

Wilman, F. (2023). Between Preservation and Clarification – The Evolution of the DSA's Liability Rules in Light of the CJEU's Case Law. In J. van Hoboken, J. P. Quintais, N. Appelman, R. Fahy, I. Buri, & M. Straub, *Putting the DSA into Practice – Enforcement, Access to Justice and Global Implications*, 35 – 50. Berlin: Verfassungsblog GmbH.

Winstock, A. R. (2017, December 26). *Pizza vs. cocaine delivery*. Retrieved February 5, 2024, from Global Drug Survey: https://www.globaldrugsurvey.com/can-you-get-cocaine-delivered-quicker-than-a-pizza/

Wolters, P., & Gellert, R. (2023). Towards a Better Notice and Action Mechanism in the DSA. *Journal of Intellectual Property, Information Technology and Electronic Commerce Law*, 14(3), 403 – 419.

Zakon, A. (2020). Optimized for Addiction: Extending Product Liability Concepts to Defectively Designed Social Media Algorithms and Overcoming the Communications Decency Act. *Wisconsin Law Review*, 2020(5), 1107 – 1146.

Zenner, E., & Geeraerts, D. (2018). One does not simply process memes: Image macros as multimodal constructions. In E. Winter-Froemel, & V. Thaler, *Cultures and Traditions of Wordplay and Wordplay Research*, 167 – 194. Berlin/Boston: De Gruyter.

Zhang, Y., & Mac, L. (2023). Social media influencers: The formation and effects of affective factors during online interactions. *International Journal of Consumer Studies*, 47(5), 1824 – 1837.

Zhao, J., Butt, R. S., Murad, M., Mirza, F., & Saleh, A.-F. M. (2022). Untying the Influence of Advertisements on Consumers Buying Behavior and Brand Loyalty Through Brand Awareness: The Moderating Role of Perceived Quality. *Frontiers in Psychology*, 12.

Zigeti, Á., Frank, R., & Tibor, K. (2023). Trust Factors in the Social Figuration of Online Drug Trafficking: A Qualitative Content Analysis on a Darknet Market. *Journal of Contemporary Criminal Justice*, 39(2), 167 – 184.

I. Introduction

Digital communication technology has been used to facilitate drug trade since its emergence. Going back to the early 1970s, a group of students from Stanford University used the ARPANET, a predecessor to the modern internet, to arrange the sale of marijuana, which can be viewed as the first rudimentary e-commerce transaction ever.[1] Since then, further technological developments, such as mobile phones, have been adopted by buyers and sellers of illicit substances alike,[2] shaping and evolving the drug trade in the process. The most transformative development in this regard was the appearance of dark net cryptomarkets, which allowed for the direct sale of drugs through the internet.[3] The key advantage of said markets was that they eliminated the need for physical transactions, lowering both the risk of detection by law enforcement agencies as well as the risk of exploitation by other market participants, which were associated with analogue forms of drug dealing.[4] However, beginning in 2019, the number of active dark net participants along with the number of cryptomarket transactions decreased, accompanied by an increase in the average transaction size, indicating that the role of said markets shifted to primarily target buyers intending to buy drugs for resale.[5] In the same time frame, new clear- and deep web-based digital drug markets, mainly mediated through social media, appeared, usurping parts of the digital drug market previously held by dark net cryptomarkets.[6]

Thus, this thesis aims to first examine the modus operandi and the consequences of these newly emerging app mediated retail drug markets utilizing social media and encrypted chat messaging services. Moreover, it aims to discuss the need for legal reform regarding the *criminal responsibility of platform providers* by scrutinizing the current United States' legislation as well as potential solutions to navigate this field, specifically notice and takedown mechanisms as set down in the EU's Digital Services Act (DSA)[7]. Therefore, the questions this paper aims to answer are primarily how these digital drug markets function, how market participants can be characterized, and what criminolog-

1 Markoff (2005), 109.
2 Barrat, et al. (2022), 2 w.r.t. May/Hough (2004), 1; Friis Søgaard, et al. (2019), 8.
3 Martin (2014), 10.
4 Buxton/Bingham (2015), 7; Holland (2020), 114; Ligget, et al. (2020), 97; Moyle, et al. (2019), 102, 107; Zigeti/Frank/Tibor (2023), 169.
5 UNODC (2023), 128 f.
6 Groshkova, et al. (2022); Oksanen, et al. (2020), 30; UNODC (2023), 132.
7 Regulation (EU) 2022/2065 of 19 October 2022 on a Single Market for Digital Services and amending Directive 2000/31/EC, OJ L 277, 1–102.

ical consequences are associated with these markets. Subsequently, it deals with the questions of what influence platform providers have on the formation and workings of these markets as well as how and to what extent a criminal liability of platforms is necessary to combat these markets. The first section focuses on the phenomenon of social media drug markets from a criminological perspective, while the second section scrutinizes the U.S. criminal liability regime of platforms hosting user generated content by contrasting it against the newly enacted DSA.

This project is important because understanding the mechanisms through which organized crime uses technological means to facilitate drug commerce and how these mechanisms interact is and will become increasingly essential for the ability of law enforcement agencies and criminal justice policymakers to combat transnational drug trade and retail drug markets effectively. Furthermore, early research suggests that the retail-level drug trade through social media is primarily utilized by adolescents and young adults – demographics that might not have otherwise been exposed to easily available drugs.[8] Consequently, it becomes imperative for social policymakers to comprehend the functioning of the digital retail market and its connections to other operations on both the clear and dark web associated with the organized digital drug trade. Moreover, as the digitalization of society progresses further, the issue of drugs and other illicit goods being sold online will likely become a more substantial issue to society. Hence, understanding and developing a solid liability framework for all internet service providers at this point in time is central to preventing the formation of a *lawless internet*[9] and will likely become even more important as time progresses.

---

8 Demant/Bakken (2019), 5; Mongan, et al. (2022), 63; Oksanen, et al. (2020), 33; Van der Sanden, et al. (2021), 7.

9 Cf. Tremble (2017), 829.

II. Key Definitions and Concepts

The following chapter introduces the required theoretical background regarding illicit markets and the layers of the internet.

A. The Geography of Illicit Retail Drug Markets

The fundamental and widely accepted theoretical criminological framework[10] regarding illicit retail markets, as framed by John Eck in 1995, involves five actors. Unsurprisingly, the main actors in said markets are the participants, meaning *buyers and sellers of illicit goods or services*, whereas offenders, LEA and managers operate as *supporting actors*.[11]

For simplicity's sake, the model assumes that buyers are predominantly interested in purchasing illicit substances for their own consumption, whereas sellers might also consume drugs themselves; they presumably sell significantly more drugs than they consume.[12] While it has been discovered that the latter assumption does not necessarily hold true,[13] this does not invalidate the model as a whole because sellers will either use the drugs they are selling, in which case their mode of supply does not affect the retail market at all, or buy drugs from another seller, in which case their role does not differ from that of an "ordinary buyer".

The role of the supporting actors can be described as follows: an offender's central goal is exploiting buyers or sellers for their *financial gain*, e.g., an offender might pretend to be a seller to rip off buyers or pose as a buyer to steal from sellers.[14] LEA, on the other hand, are focused on *controlling the sale or use of illicit drugs*, a task for which they may employ subterfuge, such as disguising themselves as buyers in order to catch a seller or vice versa.[15] Lastly, managers regulate places, meaning they *supervise access to and behavior at a place or property*.[16] Managers are either the owners of the respective space or

10 Coomber, et al. (2023), 16; Ritter (2006), 459; Van der Sanden, et al. Choice (2022), 2; cf. Ejbye-Ernst, et al. (2023).
11 Eck (1995), 70.
12 Ibid.
13 Kerr, et al. (2008), 150; Semple, et al. (2011), 521.
14 Eck (1995), 70.
15 Ibid.
16 Ibid.

have specifically been appointed by the owners to oversee it, examples include landlords, store owners, park rangers, and maintenance workers.[17]

According to Eck, market participants are presented with a *fundamental dilemma* concerning how to exchange illicit drugs when doing so inherently poses high risks.[18] The issue lies in the fact that markets, in general, require buyers and sellers to be mutually accessible; however, given the *illicit nature* of drug markets, being accessible is accompanied by two fundamental risk factors.[19] On the one hand, sellers, and to a lesser extent, buyers, are at *considerable risk of detection by the police* in a way that neither side can know for certain that they're not dealing with an undercover police officer or a police informant.[20] On the other hand, these markets are neither regulated nor is there a third party enforcing the rules of the market on which the main actors could rely upon, making *chicanery, duplicity, and violence* rampant threats.[21] Hence, the more accessible a market participant is, the less security he or she has; however, *there remains a strong need for both security and accessibility*.[22] Simply stated: "Although both the buyer and the seller would dearly love access to each other, they are also very threatened by each other."[23]

To counteract this issue, two distinct types of retail drug markets have emerged, which will be the focus of the subsequent sections.

1. Private Drug Markets

Private drug markets, in their essence, rely on a *social network*. In such markets, buyers and sellers will only make transactions with *screened* market participants; in other words, they either know the other side *personally* or a mutual acquaintance, the attestant, *vouches for the trustworthiness* of the other party.[24] Naturally, such a system is not infallible, but it significantly increases security, as opposed to operating without any information regarding the other side.[25] These networks have the added benefit of serving as *communication*

17 Ibid.
18 Eck (1995), 71.
19 Ibid.
20 Ibid.
21 Ibid; cf. Andreas/Wallman (2009), 225; Lum (2008), 179 f.; Magnolini, et al. (2023), 4 f.; Reuter (2009), 275 f.
22 Eck (1995), 72.
23 Ibid.
24 Id., 72 f.; May/Hough (2004), 551.
25 Coomber, et al. (2023), 16; Eck (1995), 73.

channels wherein market participants can communicate their needs and further information, such as prices or locations.[26]

Observation of private markets identified four key characteristics. The first being *low spatial attachment*: As both accessibility and security are provided through an interpersonal network, transactions can take place virtually anywhere.[27] Next, because the main actors can meet anywhere, this allows them to *operate under complete cover*; hence, managers rarely affect the dynamic of said markets.[28] Additionally, the geography of the market is likely dictated by *extra-market factors*. Put simply, where transactions take place is not dictated by the requirements of the market and its participants but rather by circumstances such as rental prices, ethnicity of participants, or transportation costs.[29] In other words, transactions take place wherever the two participants would reasonably meet, even if they were not conducting drug sales. Lastly, despite the large spatial displacement of these markets, *their density will be low*, as the social network usually *encompasses few buyers and sellers*, which requires significant effort by LEA to detect and understand said markets.[30] However, relying on private markets strictly *limits the potential revenue* a seller can generate, as it necessitates that new customers are within the reach of the underlying social network.[31] Hence, private drug markets might not be as attractive to professional criminals, such as drug dealers associated with organized crime groups.

2. Public Drug Markets

On the contrary, public drug markets are organized around *routine activities* where transactions occur *between strangers*.[32] Clearly, this increases both the number of potential sales as well as the number of potential people involved in transactions. Nevertheless, the absence of a network between buyers and sellers brings about two challenges. First, these markets *lack an institutionalized mode of communication*, and hence, market participants need to meet in common areas to establish initial contact.[33] This usually occurs in areas where both parties *routinely conduct legitimate activities*, resulting in feelings of familiarity and creating an increased perception of security.[34] Moreover, these

26 Eck (1995), 73.
27 Ibid.
28 Ibid.
29 Id., 74.
30 Ibid.
31 May/Hough (2004), 551.
32 Eck (1995), 74; May/Hough (2004), 550.
33 Ibid.
34 Ibid.

areas need to allow for communication in a way that market participants *know that the other party can be found there*.[35] Lastly, these areas are usually spatially limited and will likely be located at *major thoroughfares* or *nodes of high concentration of legitimate activities*, such as transportation hubs or shopping centers, as this increases the number of potential customers.[36]

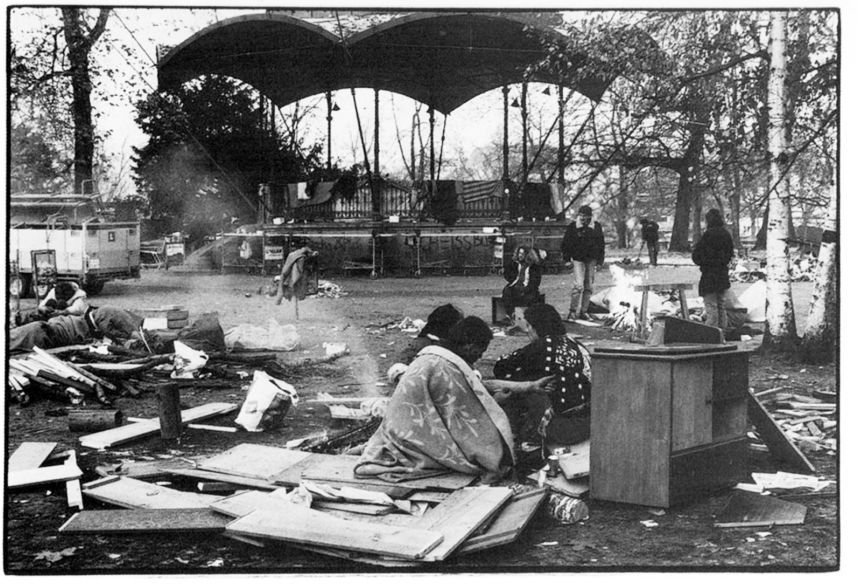

Fig. 1: Zurich's "Needle-Park" a famous public drug market in the 1980s, located next to the main station.[37]

It is further challenging that these markets cannot provide adequate security: while the familiarity of an area helps to reduce the perceived risk, market participants must rely on *defensive tactics*, such as carrying weapons, blending into legitimate activities, or looking for *visual or verbal clues* to determine that the other party is safe to engage with.[38] However, engaging in public drug markets inherently carries a risk which cannot be fully avoided.[39]

35 Id., 75.
36 Id., 75 f.
37 Bänziger/Vogler (1990), 123.
38 Eck (1995), 75; May/Hough (2004), 550 f.
39 Eck (1995), 75.

Furthermore, the characteristics of such markets can be described as follows: First, as these markets are highly dependent on specific areas, as described above, they show *high attachment to places* and sellers, if forced to move, will try to limit the distance of moving.[40] Next, because these markets need to be *visible*, they *cannot appear in places where place managers are attentive and controlling; therefore, they rely on managers who are either absent or unwilling, respectively, unable to control behavior*.[41] In conclusion, these markets frequently form in *economically depressed areas* and *run down places*, where place managers are neither capable nor incentivized to regulate behavior.[42] Additionally, market participants, especially organized crime groups, might further resort to *corruption* or *intimidation* to discourage managers from infringing upon the drug market.[43] The last observation shows the *high density* of public drug markets, meaning that a large quantity of drugs and market participants are usually found in said markets, making them a prime target for LEA.[44]

40 Ibid.
41 Ibid.
42 Eck (1995), 76; cf. Saxe, et al. (2001), 1989, 1991 f.
43 Eck (1995), 75 f.; cf. Europol (2021), 4; INCB (2011), 3; Muravska/Hughes/Pyman (2011), 8.
44 Eck (1995), 76 f.

B. Layers of the Internet

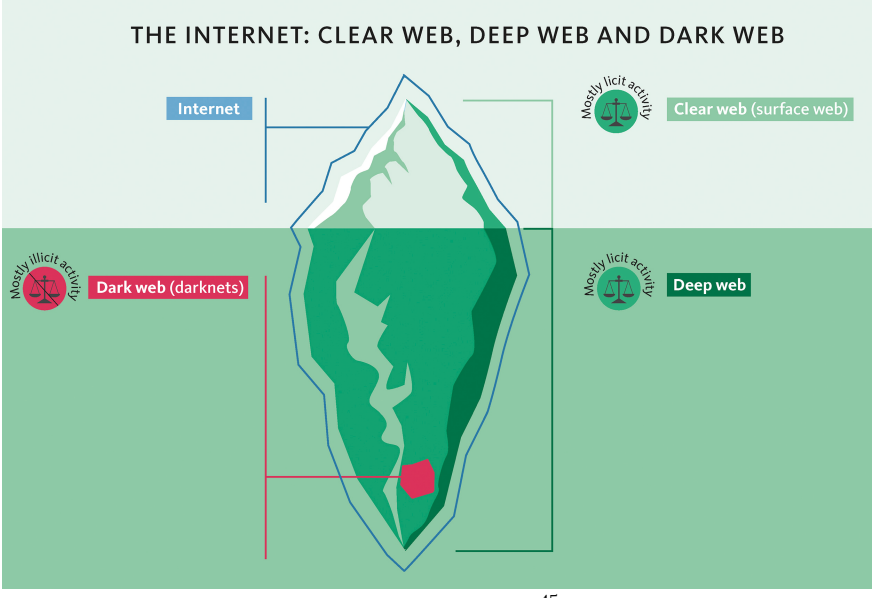

Fig. 2: The Internet: Clear web, Deep web and Dark web.[45]

As illustrated above, the internet is generally divided into three layers: the clear or surface web, the deep web, and the dark web.[46] The clear web can be described as the "*visible*" part of the internet, representing what is *indexed by standard search engines* such as Google.com.[47] In the context of social media, this involves public groups and forums, as well as public social media profiles.

Consequently, the deep web encompasses anything that *cannot be indexed* by these engines; for example, because a website is password protected or lies behind a paywall, access is only possible from within an organization, or the owner has restricted access to it.[48] For social media, this involves private forums and groups that are either password protected or require a user to be granted access, as well as private profiles, meaning profiles to which the owner has restricted access to.

---

45 Adopted from UNODC (2023), 125.
46 Barrat (2015).
47 Barrat (2015); Holland (2020), 110; Ligget, et al. (2020), 93.
48 Holland (2020), 110; Hatta (2020), 279; Ligget, et al. (2020), 93 w.f.r.; UNODC (2023), 125.

Lastly, the dark web or dark net describes a *decentralized network within the deep web*, which employs specific *anonymization technologies* to *hide its user's IP addresses* and thus, their identity and location.[49] The most widely used software to access the dark web is the onion router (TOR). It obfuscates a user's IP address by creating three or more virtual connections to servers on the TOR network, called nodes, before reconnecting to the internet; and because each node detects only the IP-address of the last and next nodes, data sent in such a way becomes *untraceable*, as the node connecting to the TOR network contains no information concerning the IP address initially used to access the dark web.[50] Functioning in a similar fashion, websites hosted through TOR can only be accessed by other users of TOR, and the physical location of their servers remains hidden.[51]

As explained in the introduction, this paper focuses on the newly emerging drug markets, which do not rely on the dark net. Nonetheless, there are indications that markets on the dark web remain central in supplying some retail markets,[52] such as the app mediated markets discussed below; therefore, synergies between these markets and the dark net will be emphasized where relevant.

49 Barrat (2015); Holland (2020), 110; Ligget, et al. (2020), 93 f.

50 Hatta (2020), 287 ff.; Ligget, et al. (2020), 93.

51 Barrat, et al. (2016), 51; Ligget, et al. (2020), 94.

52 Barrat, et al. (2016), 54; Blankers, et al. (2021), 473; Demant, et al. (2019), 381; UNODC (2023), 128, 132; cf. Van der Sanden, et al. (2023), 391 f.

III. Social Media and App Mediated Drug Markets

Up to sixty percent of the global population uses social media, a number that has been constantly growing since the first digital social networks emerged in the early 2000s,[53] thus creating new digital channels through which drug sellers could reach their audience. Where social media and other clear websites were *initially used for the discussion of topics surrounding drug use*, such as dosage, harm reduction, or drug laws;[54] in recent years, social media appears to have become the primary digital retail drug market, having already overtaken dark net cryptomarkets' retail sales volume.[55] This is most likely due to social media's simplicity of use, widespread distribution, quickness, and thus convenience, providing clear advantages over other forms of digital supply.[56] Hence, this chapter provides an exploratory overview of these markets, their participants, as well as consequences associated with said newly emerging drug markets.

A. Methodology and Limitations

The following observations regarding social media drug markets are based primarily on surveys, netnographies[57] and empirical observations. Considering the recent inception of the phenomenon of social media drug markets and the fact that much of the research was previously focused on cryptomarkets, the number of published studies, as well as participants partaking in these studies are *limited*. Additionally, significant amounts of data were gathered from government agencies and international organizations such as the UNODC, which might have the tendency to overemphasize issues relating to their purpose, thus creating biases. Therefore, observations shown and conclusions drawn during this chapter must be *critically scrutinized*.

Furthermore, the studies discussed in this chapter are limited to a single country or region, meaning that they do not *adequately account for the large national differences* that exist regarding both the nature of drug markets, so-

53 Kemp (2024).
54 Cf. Rolando/Beccaria (2019); Soussan/Kjellgren (2014); Wax (2002).
55 Groshkova, et al. (2022); Oksanen, et al. (2020), 34; Van der Sanden, et al. Choice (2022), 7; UNODC (2023), 132.
56 Moyle, et al. (2019), 105 ff., 109; Van der Sanden, et al. Choice (2022), 7; Van der Sanden, et al. (2023), 382, 392.
57 Demant/Aagesen (2022), 6 f.; cf. Kozinets (2015), 291.

cial media use patterns[58], as well as substantive and procedural criminal law.[59] E.g., Danish drug sellers usually do not rely on encrypted chat messaging services, as Danish procedural law effectively *prohibits the use of wiretapping and agent provocateurs* against retail drug dealers, whereas, in most other countries, such apps are frequently used to avoid detection by LEA.[60] The last limitation concerns the issue of *undercoverage*, meaning the underrepresentation of specific groups of people within surveys.[61] Participants of the studies upon which significant parts of this chapter are founded were primarily buyers, leading to a perspective that rarely takes the position of the sellers. Furthermore, observations regarding sellers were frequently made from a buyer's perspective, carrying a risk of further bias.

Lastly, when discussing or presenting empirical observations, there is no certainty that profiles and groups identified as drug selling are actually involved in dealing drugs. Thus, the observational evidence should always be viewed in combination with the current academic research.

B. General Observations

Examining social media drug markets, it can be noted primarily that their existence is a *ubiquitous phenomenon*, as signs of such markets are found on all major social media platforms.[62] While a recent study claimed that TikTok and platforms operated by Meta no longer exhibit indicators of drug sales occurring on these platforms,[63] most studies show the opposite to be the case.[64]

Next, it becomes apparent that social media drug markets provide drugs at a *notably lower barrier of entry*. The omnipresence of social media in people's daily lives clearly makes accessing drugs very convenient,[65] since it requires

---

58 Cf. Kemp (2024).

59 Bakken/Oksanen/Demant (2022), 434; Demant, et al. (2019), 384; Friis Søgaard, et al. (2019), 10; cf. further Demant/Aagesen (2022), 25 f.; Demant/Bakken (2019), 9 ff.

60 Friis Søgaard, et al. (2019), 10; cf. Moyle, et al. (2019), 106 f.; Van der Sanden, et al. Choice (2022), 5 ff.

61 Mulry (2008), 162.

62 McCulloch/Furlong (2019), 17; Groshkova, et al. (2022), House Hearing 118-13, 80, 102, 117; Moyle, et al. (2019), 101, 103 f.; UNODC (2022), 57; cf. Van der Sanden, et al. Discord (2022).

63 Demant/Aagesen (2022), 7 f.

64 Demant/Aagesen (2024); Finklea/Sacco (2022), 1; Fuller, et al. (2024), 56; Haupt, et al. (2022), 5; cf. Rutherford, et al. (2021), 1123 f.

65 Cf. Anderson/Gottfried/Nolan (2023); Kemp (2024); Matassi/Boczkowski/Mitchelstein (2019).

no specialist knowledge and, contrary to other forms of supply, such as cryptomarkets, *is not accompanied by stigmas and taboos*.[66]

Crucially, social media platforms rely on *algorithms* to *personalize* what content a user is exposed to. While it is part of the nature of algorithms that it is *impossible to fully understand their workings*,[67] simply stated, such a content recommendation algorithm[68] calculates what content a user might be interested in by taking into account, among other unknown factors, *demographic data* such as *age*, *gender*, *race*, *psychological disposition*, user behavior, and the behavior of a user's network, which encompasses the accounts with which the user frequently interacts with, as well as the recommended content itself.[69] In consequence, a user's first exposure to drug related content can occur *accidentally*,[70] as it requires no conscious action by him or her, functioning diametrically opposite to dark net cryptomarkets, which, as explained before, demands the conscious and somewhat tedious act of establishing a connection to the TOR browser. This further lowers the barrier of entry to social media drug markets and increases its ability to reach groups which would otherwise not have been exposed to drug markets.[71] Moreover, social media platforms have been shown to act as *echo chambers*,[72] where users are more frequently presented with content that aligns with their own worldview, thus reinforcing such views.[73] While the influence of echo chambers on drug consumption specifically is yet to be studied, it seems reasonable to assume that social media's echo chamber effect could *reinforce positive attitudes towards drug consumption and consequently increase consumption*.

Moreover, by interacting positively with drug related content, a user will be algorithmically presented with further drug related content, allowing buyers and sellers to quickly expand their network beyond what would have been

---

66 Childs/Bull/Coomber (2022), 412; Coomber, et al. (2023), 19 f.; Demant/Bakken (2019), 19; Groshkova, et al. (2022); Moyle, et al. (2019), 105 f.; Van der Sanden, et al. Discord (2022), 460, 472.

67 Bathaee (2018), 891 f.; Eg/Demirkol Tønnesen/Tennfjord (2023), 13.

68 Cf. generally Narayanan (2023); Rucker (2023), 247 ff.

69 Bathaee (2018), 891 f.; Eg/Demirkol Tønnesen/Tennfjord (2023), 13; Haupt, et al. (2022), 8; Kim (2017), 149; McCulloch/Furlong (2019), 17 f.; Narayanan (2023), 23 f.; Rassameeroj/Wu (2019), 197; cf. Gonzalez v. Google LLC, 2 F.4th 871, 895 (9th Cir. 2021).

70 Cf. Demant/Bakken (2019), 19; Hoye (2023), 162.

71 Demant/Aagesen (2022), 3; Demant, et al. (2019), 378; Kettering, et al. (2023), 61; Van der Sanden, et al. Discord (2022), 469.

72 Barberá, et al. (2015), 1539 f.; Grömping (2014), 53; Morini/Pollacci/Rossetti (2021), 16; Quattrociocchi/ Scala/Sunstein (2016), 14.

73 Cinelli, et al. (2021), 1; Morini/Pollacci/Rossetti (2021), 1.

possible on analogue markets.[74] Some researchers also suggest that the wider array of available substances could potentially trigger a "*supply gateway effect*",[75] meaning that buyers on social media drug markets are more likely to try drugs beyond their *normative repertoires*.[76] However, dedicated research on this topic remains to be desired.

In combination, these features lead to an increased *subjective*, in other words, *perceived*, *availability* of drugs.[77] This mirrors discoveries made regarding cryptomarkets users, though accessing these markets came with the added requirement that a user possessed some limited specialist knowledge to gain access to the dark net.[78] From research on cryptomarkets, it can be demonstrated that an increase in subjective availability initially results in a *sudden spike in drug consumption*, coined the *honeymoon period*.[79] Over a longer period of time, evidence suggests that for some people, the perceived permanent availability of drugs helped to moderate consumption since there was no need to engage in hoarding drugs; for others, however, the constant availability of drugs led to intense use and subsequent harm.[80] Thus, it can be inferred that social media drug markets will likely influence its users in a similar way; however, there is currently no dedicated research on the effect of heightened subjective availability through social media.

While social media has the potential to *expand the variety of available substances* for a given consumer, in comparison to dark net cryptomarkets,[81] social media drug markets usually only offer the *most widely demanded substances*.[82] *Cannabis* was sold and advertised *significantly more* than any other substance, usually followed by cocaine and MDMA/ecstasy.[83] Furthermore, drugs were usually *traded in smaller quantities* intended for *individual consumption* only, whereas a widespread social media wholesale market, which, as mentioned previously, can usually be found on cryptomarkets, does not ap-

---

74 Bakken/Demant (2019), 258; Demant/Aagesen (2022), 10 f., 24; McCulloch/Furlong (2019), 56; Van der Sanden, et al. (2023), 394 f.

75 Cf. Aldridge/Stevens/Barrat (2018), 792.

76 Demant/Aagesen (2022), 19; Demant/Bakken (2019), 5; McCulloch/Furlong (2019), 63 f.; Moyle, et al. (2019), 109; Van der Sanden, et al. Discord (2022), 460.

77 Moyle, et al. (2019), 104; Van der Sanden, et al. (2021), 7; Van der Sanden, et al. (2023), 394; cf. regarding the concept of subjective availability: Abbey/Scott/Smith (1993), 490 w.f.r.

78 Barrat, et al. (2016), 51; cf. Moyle, et al. (2019), 107; Bakken/Oksanen/Demant (2022), 432 f.

79 Barrat, et al. (2016), 53 f.

80 Id., 55.

81 Bancroft/Scott Reid (2016), 44; Barrat/Ferris/Winstock (2016), 27; Demant/Bakken (2019), 14.

82 Demant/Bakken (2019), 14; McCulloch/Furlong (2019), 17 f.; Moyle, et al. (2019), 106, 109.

83 Demant/Bakken (2019), 14; INCB (2024), 7; McCulloch/Furlong (2019), 17 f.; Moyle, et al. (2019), 106, 109.

pear to exist at the moment.[84] Lastly, considering the drug market as a whole, social media drug markets appear to amount to a small fraction of drug transactions, with the large majority still taking place offline.[85] However, given the rapid growth of e-commerce and social media in the past 15 years,[86] it seems likely that the importance of drugs traded digitally, i.a., through social media, will increase significantly in the near future.

Contrary to cryptomarkets, which essentially eliminated physical transactions and thus risks traditionally associated with drug dealing, such as violence or detection by LEA,[87] transactions arranged through social media drug markets usually *require a physical meeting*.[88] While social media drug markets cannot provide benefits of safety, the need for a physical meeting likely stems from the fact that these markets are generally bound to a city or neighborhood and are, above all, characterized by rapid deliveries.[89] Due to said nature of these markets, the focus of this section lies primarily on non-transnational activities; however, as will be discussed, some quantitative and empirical data suggests a significant involvement of (transnational) organized crime groups in social media drug markets.

This does, however, mean that understanding the characteristics of market participants on social media drug markets remains central to reducing harm beyond the consumption of drugs. In this context, it becomes specifically problematic that social media drug markets require buyers to meet sellers alone, even though they are usually complete strangers, thus carrying an increased risk of violence.[90] A risk that is generally less prevalent amongst analogue drug markets, as meetings with complete strangers are usually limited to public markets in which the surrounding environment provides some limited safety from exploitation. Additionally, one study identified that buyers of drugs usually resort to using their personal social media accounts, which they

---

84 Blankers, et al. (2021), 5; Moeller/Munksgaard/Demant (2021), 4; cf. Van der Sanden, et al. Choice (2022), 5 f.

85 Demant/Bakken (2019), 15 f.; McCulloch/Furlong (2019), 19; Mongan, et al. (2022), 44; Oksanen, et al. (2020), 34; Van der Sanden, et al. (2021), 4.

86 Cf. Barthel, et al. (2023); Bledsoe (2023); Kemp (2024); International Trade Administration (2024); Snyder/Aditham (2024).

87 Buxton/Bingham (2015), 11; Holland (2020), 116; Ligget, et al. (2020), 95; Pergolizzi Jr, et al. (2017), 791; cf. Moyle, et al. (2019), 108.

88 Bakken/Demant (2019), 257; Demant/Bakken (2019), 8; Moyle, et al. (2019), 102, 104; Van der Sanden, et al. Discord (2022), 459.

89 Adejoh, et al. (2020), 32 f.; Bakken/Demant (2019), 259; Dewey/Buzzeti (2024), 7, 10; Moyle, et al. (2019), 102, 104 f.; Van der Sanden, et al. (2021), 4; Van der Sanden, et al. Discord (2022), 454, 459; cf. Friis Søgaard, et al. (2019), 1.

90 McCulloch/Furlong (2019), 66; cf. Demant, et al. (2019), 383; Moyle, et al. (2019), 108; Van der Sanden, et al. Discord (2022), 472.

also use for licit purposes, thus containing further personal information, such as the buyer's place of residence, friends and family members, and in some extreme cases, even their live location.[91] This information, which is usually not available to drug dealers, can be used by nefarious actors for intimidation and exploitation.[92]

C. Types of Social Media Drug Markets

It is widely accepted that social media drug markets can be placed within the previously introduced framework as a *continuum ranging from private to public drug markets*.[93] However, because there are no static boundaries between these markets, market participants frequently *shift* from open to closed markets and vice versa, depending on, e.g., the stage of a transaction.[94] Additionally, the existence of *semi-public/hybrid drug markets* on social media has been noted by some researchers.[95] Thus, the following sections deal with the characteristics of these distinct types of drug markets as well as their interactions.

1. Public Digital Drug Markets

Similar to their analogue counterparts, in public digital markets, advertisement and dealing takes place between strangers in easily accessible and visible digital spaces, such as public posts and profiles on Facebook, Instagram, or X, as well as in easily accessible groups, servers, and forums, found in particular on Telegram, Reddit, and Discord.[96] The platforms utilized by these markets generally follow the logic of analogue public drug markets, meaning that they *usually form on platforms that are frequently used for licit activities within a given demographic*.[97]

---

91 McCulloch/Furlong (2019), 67.

92 Ibid.

93 Bakken/Demant (2019), 257 ff.; Bakken/Oksanen/Demant (2022), 425 f.; Demant/Aagesen (2022), 4; Haupt, et al. (2022), 2; Van der Sanden, et al. Choice (2022), 2; Van der Sanden, et al. Discord (2022), 456 f.

94 Bakken/Demant (2019), 258 f.; Coomber, et al. (2023), 18; Demant, et al. (2019); 379 f., 383; Moeller (2022), 498; Petersen, et al. (2021), 6; Van der Sanden, et al. Choice (2022), 6.

95 Bakken/Demant (2019), 256 f., 259 f.; Demant/Aagesen (2022), 26; Van der Sanden, et al. Discord (2022), 457, 471; cf. Eck (1995), 77; May/Hough (2004), 553.

96 Bakken/Demant (2019), 257; Van der Sanden, et al. Choice (2022), 2; cf. Demant/Aagesen (2022), 15 ff.; Demant/Bakken (2019), 9 ff.; Van der Sanden, et al. Discord (2022).

97 Coomber, et al. (2023), 17 f.; Moyle, et al. (2019), 108; Van der Sanden, et al. Choice (2022), 6 f.

While preliminary research was focused on open public groups, where dealing took place in front of everyone, more recent studies suggest that the dynamic of public social media drug dealing has changed. They now take place either in groups to which *access is strictly limited* or via encrypted messaging services, with public posts functioning primarily as advertisement, containing the information required to contact the seller.[98] Because access to these private groups usually requires vouching, thus a *social connection*,[99] these groups represent a market type more reminiscent of private markets, with the obvious difference that contact is not limited to direct communication; thus, these markets fall outside of the scope of this chapter. As researchers' access to such groups and the ability to conduct individual empirical research is limited to nonexistent, such markets will be excluded from the discussion of this thesis in general. However, there is substantial ground and need to investigate this type of market further. Nonetheless, these changes do not signify a complete absence of such public groups, as has been noted recently during the observation of Scandinavian drug markets and through empirical research; although, compared to previous studies, their significance has clearly declined.[100]

It is also worth noting that the description of changing market dynamics has specifically not affected the drug trade on Telegram, which still remains largely centered around open group chats.[101] This does not come as a surprise, however, as Telegram has refused to cooperate with LEA around the world and employs selective and limited content moderation, thus creating an *environment for flourishing illicit activities*.[102]

These changes in the market dynamics likely stem from tighter content moderation applied to public groups on e.g. Facebook and Reddit.[103] Generally speaking, *ineffective or absent content moderation is required for a thriving public drug market to form*;[104] hence, content moderators effectively fit the role of managers in Ecks theoretical framework applied to a digital context. In line with Ecks thinking, the focused media attention led to more strenuous moderation of public groups and forums.[105] However, platforms remain largely unwilling to police public posts and profiles advertising contact information to

98 Bakken/Demant (2019), 259 f.; Demant/Aagesen (2022), 25 f.; cf. McCulloch/Furlong (2019), 56; Moyle, et al. (2019), 103.

99 Demant/Aagesen (2022), 17; Van der Sanden, et al. Discord (2022), 463 f.

100 Demant/Aagesen (2024); cf. Demant/Aagesen (2022), 15 ff.; Demant/Bakken (2019), 9 ff.

101 Blankers, et al. (2021), 2; Bleih (2022); Dewey/Buzzetti (2024), 5 f.

102 Barrat, et al. (2022), 2 w.f.r.; c.f. Marks/Nemer (2022).

103 Demant/Aagesen (2022), 9, 18 cf. the list of subreddits mentioned, all of which have since been removed by Reddit; Van der Sanden, et al. Discord (2022), 471.

104 Demant/Aagesen (2022), 7, 25; Haupt, et al. (2022), 6; cf. Finklea/Sacco (2022), 2.

105 Demant/Aagesen (2022), 4, 7.

engage in transactions via messenger apps, considering the to date only empirically evident simplicity of finding such public posts and profiles. Nonetheless, it is indisputable that stronger *content moderation has a significant effect on the disruption of public drug markets*.[106] This becomes further apparent by the fact that the aforementioned private Facebook groups, which exist to this day, are less tightly moderated, as the responsibility for moderation is largely left in the hands of the group administrators.[107] To complicate matters further, public sellers try to avoid detection by content moderation and also LEA by employing defensive tactics, such as using codified languages and emojis[108], limiting permanently visible pictures of drugs, thus resorting to *ephemeral content*, such as e.g. Instagram stories which remain visible for only 24 hours, employing multiple fake profiles in case one gets compromised, as well as adding notices indicating that drugs are not for sale, despite clearly advertising for the sale on encrypted messaging apps.[109]

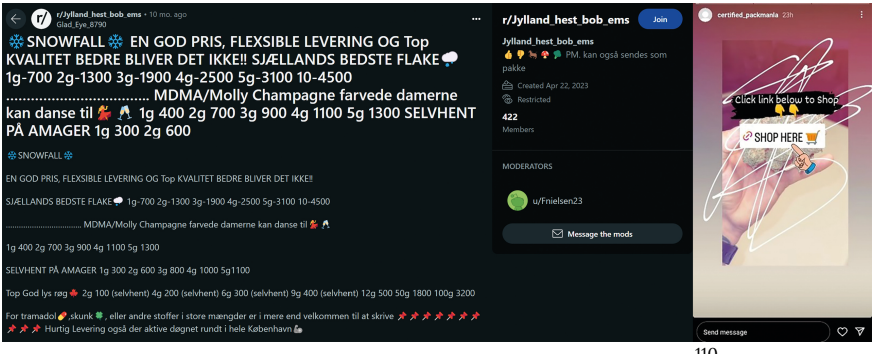

Fig. 3: Use of emojis and Instagram Stories by social media drug dealers.[110]

While such behavior clearly is intended to obstruct content moderation, detection, if taken seriously, remains feasible, as buyers and sellers must remain capable of finding and identifying each other, therefore relying on well-known words and emojis to "disguise" the true nature of posts, which are easily identifiable. Especially the recent emergence of large language models and image detection through machine learning proves to be a powerful tool for content

106 Demant/Aagesen (2022), 25.
107 Demant/Aagesen (2022), 9, 17.
108 E.g. a snowflake for cocaine, a pill for MDMA or a maple leaf for cannabis, see: Kettering, et al. (2023), 42; McCulloch/Furlong (2019), 55.
109 Bakken (2021), 61; Demant/Aagesen (2022), 6; Demant, et al. (2019), 380; Groshkova, et al. (2022); Haupt, et al. (2022), 8; Kettering, et al. (2023), 58; McCulloch/Furlong (2019), 27 f., 38, 40, 44 f., 52; Van der Sanden, et al. (2024), 385.
110 Screenshots captured by the author.

moderators, allowing for automated discoveries of illicit content.[111] However, while content moderation clearly impacts drug dealing and the market dynamics on a given platform, researchers noted that a decline in sales on a specific digital market can, at best, be described as resulting in a *dispersion of markets*, where either new types of markets emerge on the same platform, such as the shift from open to restricted Facebook groups, or a new platform is used, absorbing the previous market's participants.[112] *Therefore, it is insufficient to leave content moderation entirely up to the platforms' discretion, as combating social media drug markets requires that all platforms uphold a minimum standard of content moderation* because, as Eck's framework and preliminary research show, the market will always move to a digital space, where the platform provider does not adequately take on the role of place manager. In order to guarantee a minimum standard of effective content moderation, *legislative action* might be necessary, as will be discussed in the last section of this paper.

Upon observation of these markets, their most apparent attribute is their *open and competitive structure*, which primarily stems from the fact that market access is effortless, requiring, at most, a link to access a specific forum.[113] Hence, sellers constantly struggle to keep existing buyers and expand their reach.[114] As for the buyers, they rely on Hashtags of popular drug related slang words, codified emojis as well as algorithmic suggestions of new profiles to expand their network of buyers.[115]

Furthermore, these markets can be described as *seller-centric*, meaning that the majority of posts observed are sellers advertising currently available goods, which creates an environment in which the buyer only has to choose with whom he or she wants to engage in a transaction, further reducing the barrier of entry associated with having to initiate a transaction.[116]

Adhering to Eck's observations, the openness of said markets, however, also increases *risks for both parties*. In addition to the risks traditionally associated with drug markets, researchers noted an increased risk of coming into contact with organized crime groups and receiving low quality or adulterated drugs

---

111 Chuanbo, et al. (2021), 19 f.; Rupa/Gangopadhyay (2020), 242 f.; cf. Oranburg (2022), 595; Fuller, et al. (2024), 67.

112 Demant/Aagesen (2022), 25.

113 Demant/Aagesen (2022), 19; Bakken/Demant (2019), 257 f., 260; Moeller (2022), 498; Van der Sanden, et al. Discord (2022), 469 f.

114 Bakken/Demant (2019), 258.

115 Bakken/Demant (2019), 258; Coomber, et al. (2023), 18; McCulloch/Furlong (2019), 14, 38 f., 43; cf. Demant/Aagesen (2022), 10; Petersen, et al. (2021).

116 Bakken/Demant (2019), 260; Demant/Aagesen (2022), 19; Coomber, et al. (2023), 18; Demant/Bakken (2019), 9, 13, 17 f.; Demant, et al. (2019), 384.

when sourcing drugs through public social media drug markets.[117] One study linked the increased risk of detection for sellers to significantly larger quantity discounts offered on social media in comparison to cryptomarkets, indicating that sellers perceive the risk of detection to be higher as they are more pressed to get rid of large quantities of drugs quickly.[118] To limit the risk for buyers, some markets employ rating systems similar to those found on *dark net cryptomarkets*.[119] However, these are only rarely encountered, most likely due to the limited hierarchical structure of social media drug markets. The limited examples found further indicated that their mechanisms are severely non-transparent and less effective.[120] Moreover, such a system can only exist within confined groups; thus, the strictly public market can, at best, rely on social media's inherent features, namely likes and comments, to navigate the figuration of trust.[121]

2. Private Digital Markets

In contrast to traditional private markets, a private digital market no longer relies on the existence of an attestant to connect buyers and sellers, as the information required to reach a seller is rapidly disseminated via public social media posts. The defining feature of this market type, however, is the use of, usually encrypted, digital communication channels to establish a *peer-to-peer connection* between buyer and seller.[122] Having said that private digital markets exist in two very distinct ways. The first one being an *extension of the public markets*, where, as explained above and visible in figure 4, a buyer finds a seller's contact information, and the transaction gets finalized through direct communication via an encrypted application.[123] Additionally, functioning similarly to analogue private markets, a seller's contact information might also be shared among friends and acquaintances. Here social media becomes only relevant as a means of contact, with its role effectively not differing from a mobile phone.[124]

---

117 Demant/Aagesen (2022), 21; Dewey/Buzzetti (2024), 8 f.; Moeller (2022), 501; Moyle, et al. (2019), 108 f.; Van der Sanden, et al. (2021), 7; Van der Sanden, et al. Discord (2022), 457, 464, 468.

118 Moeller/Munksgaard/Demant (2021), 4.

119 Cf. Martin (2014), Moeller (2022), 496 w.f.r.

120 Bakken (2021), 52; Bakken/Demant (2019), 259; Coomber, et al. (2023), 22; Demant/Aagesen (2022), 21 ff.; Moeller (2022), 498; cf. Van der Sanden, et al. Discord (2022), 467 f.

121 Bakken/Demant (2019), 260; Moyle, et al. (2019), 107.

122 Bakken/Demant (2019), 258 f.; Moyle, et al. (2019), 102; Van der Sanden, et al. Choice (2022), 2.

123 Demant, et al. (2019), 383; INCB (2024), 6; McCulloch/Furlong (2019), 46 f., 62; Moyle, et al. (2019), 108.

124 Bakken/Demant (2019), 259 f.; Van der Sanden, et al. Choice (2022), 5; cf. as a whole: May/Hough (2004).

On the other hand, private communication via social media is frequently used for social supply, which denotes "small-scale drug selling carried out between friends or social contacts, often with the intention to recoup the costs of the seller's own drug consumption or to earn a modest profit."[125] These supply chains usually employ whatever social media platform is used for non-drug related communication as well, thus shifting perceptions of what is considered drug dealing to the extent that sellers do not realize the criminal nature of their behavior.[126] Nonetheless, social supply remains a way to avoid a *commercial drug market* and can thus function as a form of harm reduction.[127] However, as the focus of this work lies on commercial markets, the following observations largely omit the social supply market unless specifically noted.

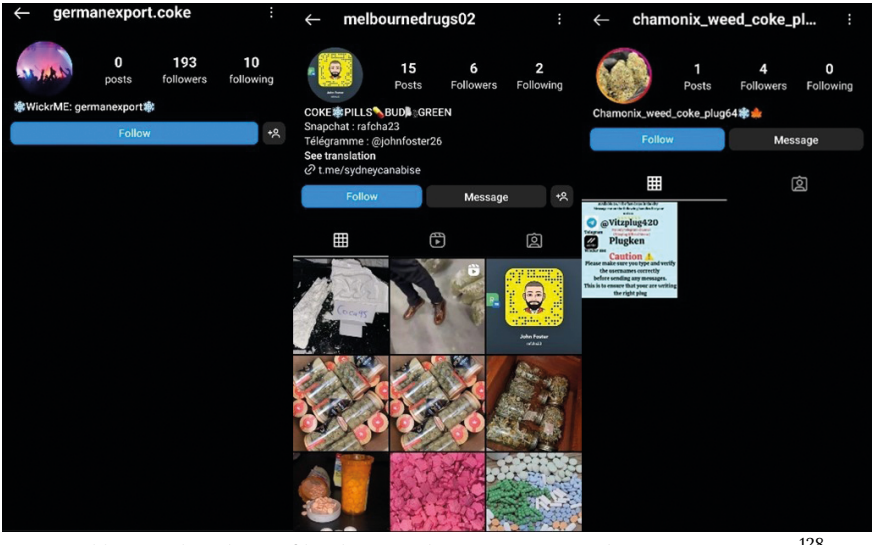

Fig. 4: Public social media profiles directing buyers to private chat messenger apps.[128]

The last defining aspect of private markets is their *buyer-centric* nature, as they are reliant on the buyer initiating a transaction.[129] On the other hand, what substances are traded usually depends on what a given seller has avail-

125 Van der Sanden, et al. Choice (2022), 2; cf. Moyle, et al. (2019), 108; Van der Sanden, et al. (2023), 384 f.

126 Van der Sanden, et al. Choice (2022), 2, 6 f.; cf. as a whole: Van der Sanden/Wilkins/Rychert (2023).

127 Moyle, et al. (2019), 109; Van der Sanden, et al. Choice (2022), 8; Van der Sanden, et al. (2023); 393; cf. Coomber/Turnbull (2007), 860.

128 Screenshots captured by the author.

129 Bakken/Demant, 260 f.

able; however, given the *intermingled nature* of public digital drug markets and commercial private ones, that usually does not limit a buyer's ability to source a specific drug.[130] This presents one of the two fundamental differences to analogue private markets, in which expanding a network is limited by one's social contacts, which generally do not involve a seemingly infinite number of drug sellers.

3. Semi-Public Digital Markets

The key feature of private digital markets, as opposed to private analogue markets, is the possibility for sellers to communicate with a larger network of buyers without having to advertise publicly, thus limiting their own risk of detection. In these semi-public markets sellers make use of social media and messenger apps, which allow them to advertise their products to previous buyers or people who have shown interest in buying drugs.[131] Stories, which are pictures that remain visible to given contacts for 24 hours on platforms such as Snapchat or WhatsApp, as well as messages sent to multiple people, are frequently used for this purpose.[132]

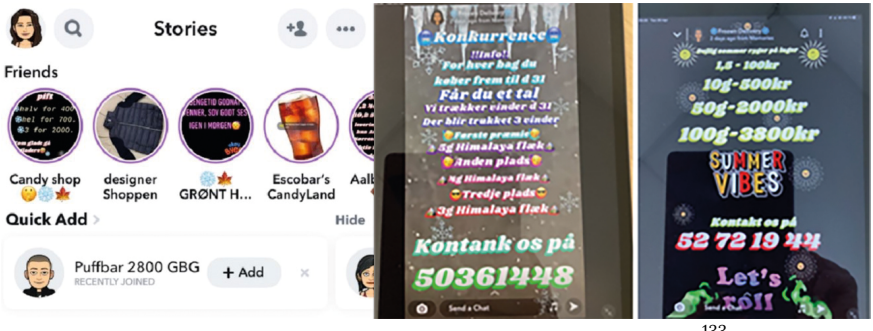

Fig. 5: Various Snapchat Stories advertising drugs and other illicit goods.[133]

Figure 5 shows screenshots taken from a Danish research profile on Snapchat that befriended various social media drug sellers. Noteworthy at first is the explicit use of drug related slang words and emojis in profile names, which makes these profiles easy to find for buyers but should also trivialize detection by the platform. Furthermore, both stories posted by the same Snapchat account

130 Cf. Demant/Aagesen (2022), 19; McCulloch/Furlong (2019), 63 f.; Moyle, et al. (2019), 106.
131 Demant/Aagesen (2022), 9; Demant/Bakken (2019), 9; Moyle, et al. (2019), 107.
132 Bakken/Demant (2019), 257, 261; McCulloch/Furlong (2019), 30; Van der Sanden, et al. Discord (2022), 457.
133 Demant/Aagesen (2022), 11 f.

ask interested people to contact them via different phone numbers.[134] This shows that Snapchat is used only for its possibility of semi-public advertisement, whereas contact gets directed to other, likely better encrypted, messenger apps.[135] Moreover, the use of different phone numbers suggests that the profile in question is part of a larger, organized operation, placing itself consciously between private and public markets. Lastly, the story on the left involves a raffle, where participants can win from three to five grams of cocaine,[136] indicating further that professional social media drug sellers utilize semi-public markets as an important platform for advertisement since giving away twelve grams of cocaine makes no sense for a seller in a social supply context. Thus, research on the involvement of professional sellers and organized crime must further focus on semi-public marketing strategies.

On the other hand, it bears noting that in most other cases, the advertisement was directed at finalizing a transaction directly via Snapchat,[137] especially in less organized market environments and, though research in this context does not exist, most likely also in the context of social supply.

In short, social media drug markets fall into the same categories as illicit markets generally, with the key exception that moving from one market to another is not only simple but *ingrained in the inner workings of most of these markets*. Public and anonymous social media accounts are used by buyers and sellers to expand their networks, whereas private social media platforms, often sophisticatedly encrypted chat messaging services, are then used to finalize transactions. Lastly, certain applications combine features of both market types, allowing for limited and targeted advertising aimed at previous customers, demonstrating that newly emerging technological features can and will be utilized by participants of the drug trade now and in the future. It is, therefore, imperative to *develop a robust and consistent liability framework* to prevent the distribution of illicit content *by upholding uniform content moderation standards* for illicit user-generated content.

D. Characterization of Market Participants

Despite the few studies concerning the social media drug trade, one common denominator of those focused on market participants was that buyers on social media were disproportionately younger and often previously unexposed

134 cf. for the translation: Demant/Aagesen (2019), 11.
135 Cf. also McCulloch/Furlong (2019), 31.
136 Demant/Aagesen (2022), 11.
137 McCulloch/Furlong (2019), 30 ff.

to drugs.[138] A study from New Zealand indicates that the relationship between age and drug purchases on social media was especially pronounced for people under the age of 20, with the strongest correlation being observed with regard to minors, aged 16 to 17.[139]

Perhaps unsurprisingly, frequent social media consumption correlated with seeing as well as buying drugs through social media.[140] One study further focused on character traits, which were more frequently observed in young adults sourcing drugs through social media. First and foremost, said study discovered that young adults sourcing drugs online showed *lower self-control*, as opposed to both non-drug users and young adults which sourced drugs through analogue means.[141]

Low self-control denotes a person's inclination to focus on the short-term gratification of their needs, wants, and desires associated with a behavior instead of its long-term negative consequences.[142] The self-control theory then notes that low self-control is frequently associated with certain character traits and behavioral patterns, which include *impulsivity*, *insensitivity*, or a *tendency to respond to conflict physically rather than verbally*.[143] Consequently, people with low self-control tend to *engage in criminal behavior more frequently*.[144] This link has been abundantly supported by empirical research, which, above all, shows that low self-control is especially associated with *street crimes*.[145] Thus, the social media drug market appears to specifically target and cater to young adults at heightened risk of engaging in criminal behavior.

Furthermore, online drug buyers had fewer friends offline and showed a plethora of signs of psychological distress as well as signs of issues stemming from addiction, namely excessive forms of drinking, gambling, and internet use.[146] These characteristics might also be rooted in or related to *lower self-control*, but this relationship was not explored further. Regardless, it is impor-

---

138 Demant/Aagesen (2022), 3; Demant, et al. (2019), 378; McCulloch/Furlong (2019), 9; Mongan, et al. (2022), 63; Moyle, et al. (2019), 109; Van der Sanden, et al. Discord (2022), 469; Van der Sanden, et al. (2021), 7; cf. Oksanen, et al. (2020), 33.

139 Van der Sanden, et al. (2021), 7.

140 Fuller, et al. (2024), 65; McCulloch/Furlong (2019), 16; Van der Sanden, et al. (2021), 7.

141 Oksanen, et al. (2020), 32 f., note: while the study did not distinguish between buyers of drugs on social media and dark net cryptomarkets, the majority of participants did source their drugs through social media.

142 Gottfredson/Hirschi (1990), 32 f.; Opp (2020), 156 w.r.t. Gottfredson (2017).

143 Gottfredson/Hirschi (1990), 89 f.

144 Gottfredson/Hirschi (1990), 90.

145 Cf. Burt (2020), 47 w.f.r.; specifically, regarding cybercrime: Henson/Swartz/Reyns (2017), 767.

146 Oksanen, et al. (2020), 33.

tant to note that, even in comparison to drug users on analogue markets, buyers on digital drug markets appear to be significantly more likely to suffer from or develop addictions and other psychological problems. Another study, which did not primarily focus on characteristics of digital drug market participants, discovered that buyers of methamphetamine on social media were more frequently unemployed and had a poorer education than those sourcing on analogue markets; however, the same correlation could not be discovered with regards to buyers of cannabis.[147] Further research in this field is strongly advised, as unemployment and, to a lesser extent, poor education status also present additional risk factors for engaging in criminal behavior in general.[148]

Considering the characteristics of sellers, buyers in one study noted that they perceived to be buying drugs from a professional dealer or gang member much more frequently on social media drug markets as opposed to other markets.[149] The apparently dominant role of commercial drug sellers and organized crime groups might have serious implications when it comes to harm reduction, as it *indicates young adults moving away from social supply options*, which previously served as an important buffer protecting young and inexperienced buyers from the exploitation frequently associated with commercial drug markets.[150]

A further nethnographic discovery highlights that dealers consciously use their public platform in order to build trust with their target audience and create a sort of *parasocial relationship* with their customers, a phenomenon which has been studied and confirmed regarding social media influencers.[151] Similarly to influencers, some dealers posted humorous content and shared snippets from their daily lives, which led to young buyers of drugs on social media stating that they viewed these accounts as friends rather than dealers,[152] thus leaving them more *vulnerable to exploitation and reducing trepidations* around buying and using drugs.[153] Furthermore, social media is also used by dealers to glorify their own role and lifestyle, posting videos and images of large sums of cash as well as luxury goods, such as designer clothing and high end cars.[154]

---

147 Van der Sanden, et al. (2021), 5 f.

148 Cf. generally Britto/Pinotti/Sampaio (2022); Groot/Maassenvandenbrink (2010); Hjalmarsson & Lochner (2012); Jawadi, et al. (2021).

149 Van der Sanden, et al. (2021), 4 ff.

150 Coomber/Turnbull (2007), 860; Taylor/Potter (2013), 401 ff.; Van der Sanden, et al. (2021), 8.

151 Kim/Song (2016), 574 f.; McCulloch/Furlong (2019), 59; Reinikainen/Munnukka/Maity (2020), 290 f.; Zhang/Mac (2023), 1832.

152 McCulloch/Furlong (2019), 23, 59 f.; cf. Kettering, et al. (2023), 45

153 McCulloch/Furlong (2019), 5.

154 Id., 60.

E. Consequences of Social Media Drug Dealing

The subsequent sections deal with ramifications associated with social media drug markets. While these have been subject to some scholarly attention, the data available at the time of writing only allows for the identification of trends and potential consequences, which should be subject to further academic discussion and empirical testing.

1. Normalization of Drug Use

Amid the observed trends is the normalization of drug use among adolescents due to the increased visibility of drugs on social media,[155] thus creating or reinforcing the belief that drug use is common and largely free of consequences, even in cases where survey participants were completely oblivious as to their digital traces and the potential of monitoring by LEA.[156] To what extent social media drug markets contribute to the normalization of drug use must be tested further. However, drawing from normalization theory, it can be demonstrated that social media drug markets involve *direct implications for the normalization of drug use among adolescents and young adults.*

The concept of normalization relates to *the inclusion and acceptance of deviant people or groups and their behavior* within society.[157] Though it has to be noted that behavior that has been normalized does not become "normal", it has rather moved from "the margins towards the center of youth culture where it joins many other accommodated 'deviant' activities."[158] Since its emergence, it has been widely accepted as the central sociological framework concerning drug use.[159] According to the theory, measuring normalization observes the following five dimensions: "access and availability, drug trying rates, rates of drug use, attitudes to 'sensible' drug use by adolescents and young adults, especially of non-users, and the degree of cultural accommodation of illegal drug use."[160] Adhering to these five parameters, it can be demonstrated how social media drug markets affect the normalization of drug use among adolescents and young adults.

---

155 Fuller, et al. (2024), 69; McCulloch/Furlong (2019), 57.

156 Bakken/Oksanen/Demant (2022), 431; Fuller, et al. (2024), 69; McCulloch/Furlong (2019), 57; Moyle, et al. (2019), 108.

157 Parker/Aldridge/Measham (1998), 152; Parker/Williams/Aldridge (2002), 942.

158 Parker/Aldridge/Measham (1998), 152.

159 Measham/Shiner (2009), 502; Pennay/Mesham (2016), 187; cf. Aldridge/Measham/Williams (2011), 218.

160 Parker/Aldridge/Measham (1998), 153 ff.; Parker/Williams/Aldridge (2002), 944.

The first dimension of normalization measures the *accessibility of drugs*, stating that increasingly available drugs are indicative of an increase in acceptance.[161] Regarding digital drug markets, it has been shown for darknet cryptomarkets that an increase in subjective availability drives the process of normalization forward.[162] As mentioned previously, social media drug markets *increase the subjective availability of drugs*, especially for adolescents who otherwise had to rely on social supply options. Hence, it is reasonable to assume that social media drug markets further normalization among these groups.

The second and third dimensions measure *drug trying rates* and *drug use* among young adults. As a consequence of the sustained primacy of analogue drug markets, research focusing on the impact of social media markets on drug trying and drug use remains lacking. As noted above, social media drug markets *disproportionally target inexperienced and novice drug users*, which suggests that drug trying rates on social media should be higher; but currently, this assumption can neither be confirmed nor denied. Drug use among young people, generally speaking, has been declining since 2020, but this most likely stems at least partially from effects of the Covid-19 pandemic.[163] However, considering the positive relationship between social media advertisement and buying behavior in general,[164] as well as the association between having used drugs and seeing drugs advertised on social media,[165] it can be reasonably inferred that drugs being advertised on social media increases drug use among its target audience. Nonetheless, substantial further research is necessary. Additionally, research should also focus on the supply gateway effect and whether its effects are limited to drug users expanding their drug repertoire or if a similar effect can be observed concerning drug novices, as the empirical research discussed above suggests.

The last two dimensions relate to how *socially* and *culturally accommodated* drug use within a population is. Again, a comprehensive analysis of either criterion does not exist, but indications of social media's effect on social and cultural accommodation can be determined. Social accommodation measures attitudes towards drug use, which has been superficially touched upon in empirical research. E.g., only fifty-two percent of participants under the age of 18 were uncomfortable and concerned about seeing drugs advertised online,

161 Bakken/Demant (2019), 18; Pennay/Mesham (2016), 187.
162 Barrat, et al. (2016), 55.
163 Jones (2023); Miech, et al. (2023), 108, 163.
164 Ertemel/Ahmad (2016), 87; Haider/Shakib (2018), 10 f.; Zhao, et al. (2022), 9 w.f.r; cf. McCulloch/Furlong (2019), 20.
165 McCulloch/Furlong (2019), 19.

as opposed to the sixty-seven percent over 18 years old.[166] This implies that the *normalization effect of social media drug markets is specifically pronounced among adolescents*, which aligns with the previously discussed findings. Cultural accommodation, on the other hand, measures how drug use becomes a recreational activity which fits into adolescents' and young adults' daily lives.[167] Such an assessment naturally is difficult,[168] however, the widespread advertisement of drugs on social media in and of itself serves as at least an indication of the cultural accommodation of drug use. Furthermore, some sellers' engagement with humorous content, such as memes, which are *deeply embedded in social media sub- and pop culture in general*,[169] serves as another indication that social media drug commerce is accepted and ingrained within this online subculture.

Thus, further research should comprehensibly focus on social media's role in fostering the normalization of drug use among adolescents and young adults, given the abundance of empirical indications of social media's impact on the normalization of drug use, especially in this age group.

Additionally it bears noting that normalization appears to also extend its effects to drug dealing, especially with regard to social supply and recreational cannabis dealing.[170] In the context of social supply, social media's omnipresence and familiarity of use also appear to *influence perceptions of what counts as dealing drugs*, thus facilitating a gradual shift from drug consumption to selling behavior.[171] On the other hand, this effect might also get amplified by the self-glorification of dealers, thus enhancing adolescents' risks of exploitation by organized crime groups.[172]

2. Drift Potential

Another study highlights social media's role as a gateway for young adults to engage in other criminal activities. Especially in semi-public markets, sellers use their communication channels to recruit people into partaking in such activities.[173] Researchers came in contact with this phenomenon, *even though*

166 Id., 19 f.
167 Parker/Aldridge/Measham (1998), 156; Parker/Williams/Aldridge (2002), 949.
168 Parker/Williams/Aldridge (2002), 948.
169 Castaño Díaz (2013), 95 ff.; Luu (2020); Zenner/Geeraerts (2018), 186 f., 190.
170 Childs/Bull/Coomber (2022), 409 f.; Coomber/Moyle/South (2016), 261.
171 Van der Sanden, et al. Choice (2022), 2.
172 McCulloch/Furlong (2019), 57.
173 Demant/Aagesen (2022), 12.

the research profiles were seemingly only interested in buying popular party drugs.[174] Thus, participants of semi-public drug markets will likely be confronted with such advertisements.

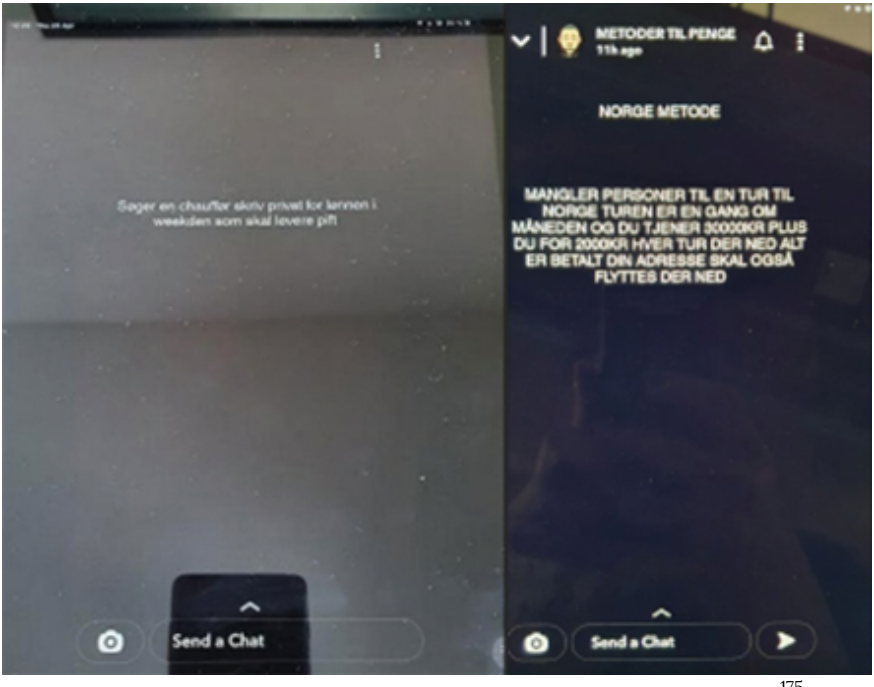

Fig. 6: Examples of Snapchat stories advertising criminal business opportunities.[175]

Figure 6 allows for the identification of two types of posts contributing to social media's drift potential. The image on the left shows a drug dealer looking for help in his drug selling operation, which was the primarily encountered phenomenon. The required tasks ranged from "mule" activity, like using their private bank accounts for transactions, withdrawing cash or buying goods, supporting roles such as drivers, to joining an *organized dealer network*.[176] The image on the right, however, stems from a Snapchat account dedicated to making money through illegitimate or illegal means, which was algorithmically

174 Id., 14.

175 Ibid, translation of the left image: 'Seeking a driver, private message for [info about] the pay, on the weekend who will deliver pift' (slang for cocaine)., translation of the right image: 'They need people who will take a monthly trip to Norway. They are offering 30 000 DKK (4 000 EUR) plus 2 000 DKK (270 EUR) for each trip. Everything is paid for, and they would also need the person engaged to move their address to Norway'.

176 Id. 12, 14.

suggested to both research accounts partaking in the nethnographic study observing drug dealers, thus signalling that these accounts potentially reach far among social media drug buyers.[177] The transnational dimension, as well as the reward for partaking in the crime advertised in the image on the right, *further suggests the involvement of a (transnational) organized crime group in the social media drug market ecosystem* and indicates active recruitment efforts by organized crime groups among buyers of drugs on social media.

In conclusion, the combination of social media drug buyers' higher risk of engaging in criminal behavior in general, the progressive normalization and, at times, glorification of both drug use, drug dealing, and other criminal behavior, as well as the drift potential fuelled by social media's affordances potentially creates a gateway for adolescents and young adults to engage in criminal activities tied to drugs and beyond.

177 Id. 13.

IV. Legal Approaches to Combat Social Media Drug Markets

In light of these newly emerging drug markets, the question of how to address the negative consequences outlined in the previous section arises. Drug use, especially among adolescents, is an inherently *complex phenomenon*.[178] Thus, it is impossible to comprehensively analyze potential solutions within the scope of this paper, especially because many of the issues related to drug use are not unique to drugs sourced or traded via social media. Considering the complexity of the underlying issue, it is not at all surprising that potential solutions concerning adolescent drug use stem from various disciplines ranging from increased education[179] and prevention programs[180] to legal approaches. From a criminal justice perspective, it bears noting in this context that most of the specific risks of social media drug markets, which go beyond the consumption of drugs itself, *could be addressed by decriminalization or legalization*, which, on one hand, would allow for adequate protection of minors, similarly to alcohol and tobacco, and, on the other hand, decrease further harm associated with social media drug markets.[181] While such a development would be desirable from a criminological perspective,[182] legalization is also a political issue, and *rapid developments cannot be expected in this regard*.[183]

Thus, the following section focuses on specific legal approaches to combat the social media drug markets, namely by focusing on the United States' legal conception of interactive service provider's liability with regard to user-generated content. Social media companies, as demonstrated above, assume the role of managers in Eck's theoretical framework and thus have a *significant impact on the formation and effectiveness of public and semi-public drug markets*. Nevertheless, platforms seem to be largely unwilling to prevent the formation of such markets, begging the question of whether they can and should be held liable for their inaction. In view of the *still persisting criminal nature* of drugs, the emphasis lies primarily on criminal liability and its capability to prevent unregulated social media drug markets from forming, with references to civil

178 Baciu (2018), 61; EMCDDA (2023), 8; EMCDDA (2021), 7; National Harm Reduction Coalition (2020); Schlag (2020), 2.

179 Griffin/Botvin (2010), 510 f.; cf. McCulloch/Furlong (2019), 79.

180 Flora (2022); 289 f.; Griffin/Botvin (2010), 511 ff.

181 Van der Sanden, et al. Discord (2022), 472.

182 Earp/Lewis/Hart (2021), 10 f.; Hughes/Stevens (2010), 1008 ff., 1017 f.; Meyers (2023), 253 ff., especially 268 f.; Stevens, et al. (2019), 47.

183 E.g. the lengthy and tedious process of decriminalization of recreational cannabis use in Germany: cf. McHugh (2024); Parker (2024); Schuetze (2024).

liability where necessary. This section focuses on United States law since most social media platforms discussed previously have their legal domicile in the United States and usually store gathered user data there.[184] This is largely due to 47 U.S.C. § 230(c)(1), providing a "safe haven"[185] for social media platforms. Hence, the subsequent sections deal with this provision, its history, judicial interpretation, and causes for concern before examining notice and takedown procedures as other forms of navigating the issue of platform responsibility.

A. Section 230(c)(1)

Beginning with an examination of its wording, Section 230(c)(1) states that "No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider." In other words, it prevents any civil and state criminal liability for interactive computer services acting as *publisher or speaker*, provided that the information in question was provided by a *third party* information content provider, where the interactive computer service merely provides the means to disseminate information.[186] By statutory definition an interactive computer service is "any information service, system, or access software provider that provides or enables computer access by multiple users to a computer server, […]"[187] Furthermore, the judicial interpretation of this term has been very extensive,[188] leaving no doubts as to the applicability of Section 230(c)(1) on social media platforms.[189] On the other hand, the term information content provider, which encompasses "any person or entity that is responsible, in whole or in part, for the creation or development of information provided through the Internet or any other interactive computer service",[190] has been interpreted rather narrowly by the courts, mitigating its applicability to social media platforms and other information content providers.[191] In that regard, it has been established within a year of the provision's emergence that *minor editorial*

184 EFF (n.d.).; cf. Roth (2023).

185 Citron/Wittes (2017), 403; EFF (n.d.); Oranburg (2022), 595 ff.; Weaver (2022), 626 ff.

186 Doe v. Twitter, Inc., 555 F. Supp. 3d 889, 897 (N.D. Cal. 2021); Brannon/Holmes (2024), 9; Scheurmann (2022), 431; Weaver (2022), 619.

187 47 U.S.C. 230(f)(2).

188 Ricci v. Teamsters Union Local 456, 781 F.3d 25, 28 (2d Cir. 2015); Carafano v. Metrosplash.com, Inc., 339 F.3d 1119, 1123 (9th Cir. 2003); Tenzer/Margulis (2022), 56; Holmes (2023), 4.

189 Cf. Doe v. Twitter, Inc., 555 F. Supp. 3d 889, 897 (N.D. Cal. 2021); Poole v. Tumblr, Inc., 404 F. Supp. 3d 637, 641 f. (D. Conn. 2019); Pennie v. Twitter, Inc., 281 F. Supp. 3d 874, 890 (N.D. Cal. 2017); Klayman v. Mark Zuckerberg & Facebook, Inc., 753 F.3d 1354, 1357 (D.C. Cir. 2014).

190 47 U.S.C. 230(f)(3).

191 Carafano v. Metrosplash.com, Inc., 339 F.3d 1119, 1123 (9th Cir. 2003).

changes did not constitute liability on behalf of the platform providers,[192] thus creating an environment in which platforms were practically immune to consequences, of both civil and criminal nature,[193] arising from third party content, such as drug advertisements. This consequence has only been further exacerbated by subsequent judicial decisions, which will be the focus of a later section. Additionally, note at this point that the provision involves some exceptions in Section 230(e), which will also be the topic of a subsequent section.

1. Historical Background

In order to understand how Section 230(c)(1) has been construed to provide an almost all-encompassing immunity for social media platforms since its enactment in 1996, it bears examining the historical context of its enactment. Section 230(c)(1) is largely understood to be a direct response to the New York state trial court's decision *Stratton Oakmont, Inc. v. Prodigy Servs.* (Stratton), in which Prodigy was held liable as the publisher of defamatory remarks made by a third party on its computer bulletin board "Money Talk".[194] To add further controversy, the court argued that because Prodigy exercised some editorial control over the 60'000 messages posted daily, its role amounted to that of a publisher, substantiating Prodigy's liability.[195] In a similar case, however, another New York District Court prevented an internet service provider from being held liable as a publisher of defamatory statements because it did not exercise any editorial control.[196] This created an untenable situation, in which *liability could only be avoided by exercising no control over user-generated content*, which was among the reasons for the enactment of section 230(c)(1).[197]

Additionally, the legislators feared that the application of publisher liability as defined in *Stratton* would impose unduly constraints on the *growth of the*

---

192 Batzel v. Smith, 333 F.3d 1018, 1031 (9th Cir. 2003); Ben Ezra, Weinstein, & Co. v. America Online Inc., 206 F.3d 980, 985 f. (10th Cir. 2000); Zeran v. America Online, 129 F.3d 327, 330 (4th Cir. 1997).

193 Carome/Payton/Jain (1997); cf. Barnes v. Yahoo!, Inc., 565 F.3d 560, 566 (9th Cir. 2009); Citron/Wittes (2017), 406.

194 Stratton Oakmont, Inc. v. Prodigy Servs., 23 Media L. Rep. (BNA) 1794, (N.Y. Sup. Ct. 1995); 141 Cong. Rec. (1995), H 8469 f. (statement of Rep. Christopher Cox); Senate Report 104-230 (1996), 194; Brannon (2019), 1.

195 Stratton Oakmont, Inc. v. Prodigy Servs., 23 Media L. Rep. (BNA) 1794, 4 ff. (N.Y. Sup. Ct. 1995) w.r.t. Miami Herald Publishing Co. v. Tornillo, 418 U.S. 241, 258 (1974).

196 Cubby, Inc. v. Compuserve Inc., 776 F. Supp. 135, 137 f., 140 f. (S.D.N.Y. 1991).

197 141 Cong. Rec. (1995), H 8469 f. (statement of Rep. Christopher Cox); Oranburg (2022), 604; Stern (2009), 560 f.

internet.[198] This sentiment led to the explicit enumeration of the provision's goals, which, according to Section 230(b), involves the promotion of "the continued development of the Internet and other interactive computer services"[199] and the preservation of "the vibrant and competitive free market that presently exists for the Internet and other interactive computer services."[200] Lastly, legislators surmised that by removing the threat of liability due to content moderation, platforms would be willing and able to create and enforce their own content moderation guidelines.[201]

In conclusion, Section 230 as a whole has proven to be effective in achieving these objectives, to the extent that it has been coined "the Twenty-Six Words That Created the Internet"[202], indicating that the internet as we know it today, *especially with regard to social media platforms*,[203] would not be the same.

2. Development through Judicial Interpretation

As mentioned at the beginning of this section, the courts have interpreted the explicit wording of Section 230(c)(1) and its applicability very broadly, constructing a far-reaching defense against liability. This section provides an overview of the relevant court decisions, which have had further implications for the extensive application of Section 230(c)(1) on social media platforms.

As early as 1997, the United States Court of Appeals established that, despite its wording including only liabilities arising from an information content provider *serving as a publisher and speaker*, Section 230(c)(1) prevents all forms of liability stemming from user-generated content, most notably *distributor liability*.[204] For the purpose of this work, an in-depth analysis of the different forms of civil liability under United States law is not required; it is, however, relevant to note that the fundamental distinction between publisher and distributor liability is that the latter requires only for the distributor to be aware of the illicit nature of the material distributed.[205] Excluding distributor liability from the immunity provided by Section 230(c)(1) would, therefore, have forced information content providers to act against illicit content after receiving notice

198 141 Cong. Rec. (1995), H 8470 (statement of Rep. Christopher Cox); cf. Zeran v. America Online, 129 F.3d 327, 330 (4th Cir. 1997); Tenzer/Margulis (2022), 55.

199 47 U.S.C. § 230(b)(1); Stern (2009), 561.

200 47 U.S.C. § 230(b)(2); Stern (2009), 561.

201 47 U.S.C. § 230(b)(3) f.; Zeran v. America Online, 129 F.3d 327, 331 (4th Cir. 1997); Dumas (2022), 1584; Rucker (2023), 253.

202 Kosseff (2019); cf. Green (2023), 49; Hoye (2023), 176; Oranburg (2022), 604.

203 Engelberg (2021); Kosseff (2019), 4; cf. Citron/Wittes (2017), 412 f.; Goldman (2017), 2.

204 Zeran v. America Online, 129 F.3d 327, 331 ff. (4th Cir. 1997).

205 Keeton/Dobbs/Keeton (1984), 810 f.; Cf. Smith v. California, 361 U.S. 147, 152 ff. (1959).

of said content.[206] In consequence, generally, neither criminal liability nor any other form of liability can be based on inaction after receiving notice of illicit content.

In direct reference to its aforementioned purpose, the court stated that liability upon notice would "[reinforce] service providers' incentives to restrict speech and abstain from self-regulation."[207] It cited *practical reasons*, namely service providers' inability to manually investigate all notices, as having a *chilling effect* on free internet speech.[208] Since then, courts have adopted this reasoning, shielding interactive computer services from any liability, even *in cases where platforms knowingly published illegal content*.[209] Furthermore, courts have established that when in doubt, a court must decide in favor of immunity,[210] which has led to such an extensive application of immunity that it even covered platforms that *were consciously designed to enable illegal activities*.[211]

The courts were further occupied with determining at what point and to what extent a platform's features and data processing create new information, which would no longer be protected under Section 230(c)(1). In its decision *Fair Housing Council v. Roommates.com* (Roommates), the Ninth Circuit Appeals Court was posed the question of whether a matchmaking service for roommates was allowed to force users to disclose preferences involving discriminatory criteria forbidden under the Fair Housing Act[212], which were then used to filter potential matches.[213] The court concluded that while the information concerning discriminatory preferences originated from a third party, by forcing its subscribers to disclose this information, roommates.com was *at least partially involved in developing this information*, hence operating as an independent information content provider.[214]

Furthermore, the court noted and addressed the issue that any website function could be viewed as developing information, thus eliminating Section

---

206 Cf. Zeran v. America Online, 129 F.3d 327, 332 f. (4th Cir. 1997); Pincus (1999), 285.

207 Zeran v. America Online, 129 F.3d 327, 333 (4th Cir. 1997).

208 Ibid.

209 Malwarebytes, Inc. v. Enigma Software Grp. USA, LLC, 592 U. S. _____, 4 (2020) w.f.r; Citron (2023), 717.

210 Goddard v. Google, Inc., Case Number C 08-2738 JF (PVT), 4 (N.D. Cal. Dec. 17, 2008), w.r.t. Fair Hous. Council v. Roommates, 521 F.3d 1157, 1174 (9th Cir. 2008); Tremble (2017), 843.

211 Jane Doe No. 1 v. Backpage.Com, LLC, 817 F.3d 12, 16 f., 21 (1st Cir. 2016).

212 42 U.S.C. § 3604(c).

213 Fair Hous. Council. v. Roommates, 521 F.3d 1157, 1160 (9th Cir. 2008); cf. Fair Housing. v. Roommates.com, 489 F.3d 921, 926 (9th Cir. 2007).

214 Fair Hous. Council. v. Roommates, 521 F.3d 1157, 1165 (9th Cir. 2008); cf. Batzel v. Smith, 333 F.3d 1018, 1035 (9th Cir. 2003).

230(1)(c)'s purpose.[215] To distinguish between protected and non-protected forms of development it formulated the *material contribution test*, stating that development refers "not merely *to augmenting the content generally*, but to *materially contributing to its alleged unlawfulness*. In other words, a website helps to develop unlawful content and thus falls outside the scope of Section 230 if it is *directly and materially involved in the alleged illegality* of the conduct."[216] On the other hand, the use of *content neutral tools*, such as a search engine by social media platforms, which could feasibly be used to conduct searches for sellers of illicit substances, would be protected under Section 230(1)(c).[217] To further illustrate the difference between content neutral tools and those materially contributing to unlawful content, in a similar case, the court argued that information disclosed to a dating website in answering a set of questions provided by the website through an open text field amounted to information provided by another information content provider, so long as it was provided through *voluntary inputs by the user*.[218] The reason being that contrary to the questionnaire in *Roommates*, these questions *did not necessarily produce unlawful content*, though they could be used to do so by pretending to be a popular actress.[219] Similarly, roommates.com would not have developed information that violated the Fair Housing Act, which was provided in its open text box – *arguably the most content neutral tool possible* – as users were only encouraged to provide further information without necessarily involving discriminatory criteria.[220]

Since then, both federal and state courts have relied on adaptations of the material contribution test to determine whether an information service provider also provided the content at stake.[221] Unanimously, courts held that search

---

215 Fair Hous. Council. v. Roommates, 521 F.3d 1157, 1167 (9th Cir. 2008).

216 Fair Hous. Council. v. Roommates, 521 F.3d 1157, 1167 f. (9th Cir. 2008), emphasis added; cf. Kimzey v. Yelp! Inc., 836 F.3d 1263, 1269 (9th Cir. 2016).

217 Cf. Fair Hous. Council. v. Roommates, 521 F.3d 1157, 1169 (9th Cir. 2008).

218 Fair Hous. Council v. Roommates, 521 F.3d 1157, 1172 (9th Cir. 2008); Fair Housing v. Roommates.com, 489 F.3d 921, 927 f. (9th Cir. 2007); Carafano v. Metrosplash.com, Inc., 339 F.3d 1119, 1124 (9th Cir. 2003); cf. for a differing view: Stern (2009), 577.

219 Carafano v. Metrosplash.com, Inc., 339 F.3d 1119, 1121 f. (9th Cir. 2003); cf. Fair Hous. Council. v. Roommates, 521 F.3d 1157, 1171 f. (9th Cir. 2008); Fair Housing v. Roommates.com, 489 F.3d 921, 927 f. (9th Cir. 2007).

220 Fair Hous. Council v. Roommates, 521 F.3d 1157, 1161, 1173 f. (9th Cir. 2008); cf. Chicago Lawyers' Comm., Civ. Rights v. Craigslist, 461 F. Supp. 2d 681, 698 (N.D. Ill. 2006).

221 Hill v. Stubhub, Inc., 727 S.E.2d 550, 558 (N.C. Ct. App. 2012); Brannon/Holmes (2024), 18; cf. Force v. Facebook, Inc., 934 F.3d 53, 68 f. (2d Cir. 2019); Marshall's Locksmith Serv. Inc. v. Google, LLC, 925 F.3d 1263, 1270 f. (D.C. Cir. 2019); Jones v. Dirty World Entertainment Recordings LLC, 755 F.3d 398, 410 ff. (6th Cir. 2014); Liapes v. Facebook, Inc., 95 Cal. App. 5th 910, 928 f. (Cal. Ct. App. 2023).

engines, even if they performed some minor editorial changes,[222] review systems[223] and social media features, which merely allow parties to "post information *of their own independent choosing* online",[224] were all content neutral and thus protected from liability under Section 230(1)(c). Lastly, courts have generally held that algorithms, especially when *used to recommend user-generated content*, did not amount to the development of content,[225] though these decisions were met with dissent by some judges.[226] The following two paragraphs illustrate how the majority concluded that algorithmic recommendations do not materially contribute to the unlawfulness of content:

In *Dyroff v. Ultimate Software Group*, the United States Court of Appeals dealt with the social network website Experience Project, which allowed users to create and join groups aimed at posting and discussing experiences and interests as well as asking questions concerning the group's topic.[227] Because the website was anonymous and not moderated, topics ranged from "I Like Dogs" to "I Love Heroin".[228] To simplify navigation, existing groups were suggested to users by machine-learning algorithms, which took into account, i.a., a user's posted content.[229] These algorithms connected Wesley Greer, a heroin addict, to a heroin dealer, eventually resulting in the death of Greer due to fentanyl poisoning.[230] Addressing whether such algorithmic recommendations amounted to developing information, the court argued that users "were not required to disclose that they were looking for heroin or other illegal drugs. Rather, users were given something *along the lines of blank text boxes* in which they could post and share experiences, questions, and answers. The recommendation and notification functions helped facilitate this user-to-user communication, but it did not materially contribute, as Plaintiff argues, to the alleged unlawfulness of the content."[231] Summarizing its judgment as follows: "Plaintiff cannot and does not plead that Ultimate Software required users to post specific content, made suggestions regarding the content of poten-

222 O'Kroley v. Fastcase, Inc., 831 F.3d 352, 355 (6th Cir. 2016); Jones v. Dirty World Entertainment Recordings LLC, 755 F.3d 398, 409 (6th Cir. 2014).

223 Kimzey v. Yelp! Inc., 836 F.3d 1263, 1270 (9th Cir. 2016).

224 Klayman v. Mark Zuckerberg & Facebook, Inc., 753 F.3d 1354, 1358 (D.C. Cir. 2014), emphasis added.

225 Gonzalez v. Google LLC, 2 F.4th 871, 894 ff. (9th Cir. 2021); Dyroff v. Ultimate Software Grp., Inc., 934 F.3d 1093, 1098 f. (9th Cir. 2019); Force v. Facebook, Inc., 934 F.3d 53, 65 ff. (2d Cir. 2019).

226 Gonzalez v. Google LLC, 2 F.4th 871, 920 ff. (9th Cir. 2021); Force v. Facebook, Inc., 934 F.3d 53, 80 ff. (2d Cir. 2019).

227 Dyroff v. Ultimate Software Grp., Inc., 934 F.3d 1093, 1094 (9th Cir. 2019).

228 Ibid.

229 Id, 1095, cf. *supra* fn. 69.

230 Ibid.

231 Id, 1099, emphasis added.

tial user posts, or *contributed to making unlawful or objectionable user posts*."[232] Thus the judges entirely avoided the central issue of whether a recommendation in and of itself involves the *genesis of new information*, which will be discussed in a subsequent section.

Both *Gonzalez v. Google* (Gonzalez) and *Force v. Facebook* (Force) dealt with the liability of social media platforms, YouTube and Facebook, respectively, based on the algorithmic recommendation of terrorist content and profiles to users likely susceptible to such propaganda.[233] Note that the United States Supreme Court has since remanded the *Gonzalez* ruling, unfortunately, without addressing Section 230.[234] Therefore, while *Gonzalez* is no longer a binding precedent, the Appellate Court is free to reaffirm its decision concerning the applicability of Section 230(1)(c), and consequently, it will be treated as such.[235] In both decisions, the court rejected the plaintiff's notion that recommendations are new information content so long as the underlying algorithms are content neutral,[236] which would not be the case if a social media platform would only recommend specific unlawful content or specifically prompted the submission of unlawful content.[237] Additionally, the court in *Force* reasoned that the use of algorithmic content recommendation is consistent with ordinary functions of a traditional publisher.[238] Lastly, the Appellate Court broadened the notion of voluntary inputs – as defined in *Roommates*[239] – to involve any *voluntary or historical actions*,[240] thus expanding the information that algorithmic recommendations can take into account under the protection of Section 230(1)(c), from what has been explicitly provided by the user, to virtually any data that can be collected by the platform even without the user's explicit consent.[241]

In conclusion, the judicial interpretation of Section 230(1)(c) protects social media platforms from practically all forms of liability stemming from their enablement of the drug trade flourishing on their platforms, even if they know of the issue, so long as they do not materially contribute to the illicit posts.

---

232 Ibid, emphasis added.

233 Gonzalez v. Google LLC, 2 F.4th 871, 880 f. (9th Cir. 2021); Force v. Facebook, Inc., 934 F.3d 53, 59, 65 f. (2d Cir. 2019).

234 Gonzalez v. Google LLC, 598 U.S. 617, 622 (2023).

235 Holmes (2023), 13.

236 Gonzalez v. Google LLC, 2 F.4th 871, 896 (9th Cir. 2021); Force v. Facebook, Inc., 934 F.3d 53, 70 (2d Cir. 2019).

237 Gonzalez v. Google LLC, 2 F.4th 871, 895 (9th Cir. 2021); cf. FTC. v. Accusearch Inc., 570 F.3d 1187, 1199 (10th Cir. 2009).

238 Force v. Facebook, Inc., 934 F.3d 53, 66 (2d Cir. 2019).

239 Fair v. Roommates, 521 F.3d 1157, 1172 (9th Cir. 2008).

240 Gonzalez v. Google LLC, 2 F.4th 871, 894 f. (9th Cir. 2021).

241 Ibid; Dumas (2022), 1605 f.; cf. Carpenter v. United States, 138 S. Ct. 2206, 2220 (2018).

3. Exceptions under Section 230(e)

To somewhat limit its broad application, Section 230 involves a catalogue of exceptions in subsection e, including federal criminal law and sex trafficking law, which will be the focus of the following paragraphs.

Section 230(e)(1) explicitly excludes the immunity from applying to violations of federal criminal statutes. While this might indicate that despite the preceding explanations, social media companies could be held criminally liable for their involvement in the facilitation of drug dealing, the reality is that given the current state of affairs, establishing such liability is virtually impossible.[242] While a plethora of federal statutes criminalize drug dealing behavior,[243] including behavior that takes place on the internet,[244] these are, perhaps unsurprisingly, aimed at traffickers and sellers of drugs, not social media platforms *acting as intermediaries enabling* such behavior. Therefore, the only way to establish criminal liability for platforms is by demonstrating that they aided and abetted the drug dealers,[245] which requires a *specific intent* by the aide that involves both the *facilitation of the commission of a crime by another* and the *underlying substantive offense*.[246] Furthermore, it is *not sufficient* to merely *know that a crime is being committed while refusing to intervene*.[247] In light of these requirements, it becomes apparent that unless a social media company is actively and willingly involved in the sale of drugs, social media platforms are not only protected from civil but also federal criminal liability.[248] It bears explicit noting that the lack of criminal liability for social media platforms is, therefore, not only a product of Section 230 but also of inadequate criminal provisions that currently do not encompass social media platforms' involvement in drug dealing.

The same applies to state criminal liability. While Section 230(e)(3) explicitly mentions state law, indeed this cannot be seen as an exception, as the provision only allows states to enforce their laws which are *consistent with Section* 230, thus providing "no substantive content"[249]. By implication, this means that

---

242 Dyer (2014), 862; Radbod (2010), 611; Tremble (2017), 829.

243 Cf. Attorney's Office New Hampshire (2020).

244 21 U.S.C. § 841(h)(1).

245 18 U.S.C. § 2, cf. 21 U.S.C. § 841(h)(1)(B).

246 Rosemond v. United States 572 U.S. 65, 77 ff. (2014); United States v. DePace, 120 F.3d 233, 238 (11th Cir. 1997); United States v. Bancalari, 110 F.3d 1425, 1429 f. (9th Cir. 1997); United States v. Sayetsitty, 107 F.3d 1405, 1412 (9th Cir. 1997); Gleason, et al. (2022), 66.

247 United States v. Andrews, 75 F.3d 552, 555 (9th Cir. 1996).

248 Cf. Twitter, Inc. v. Taamneh, 143 S. Ct. 1206, 1227 f. (2023); Angwin (2023); Larkin (2010), 97; Johnson/Castro (2021), 6; Tremple (2017), 868; cf. Citron (2023), 724 ff.

249 Atlantic Recording Corporation v. Project Playlist, 603 F. Supp. 2d 690, 702 (S.D.N.Y. 2009).

states cannot enforce their laws, *which would treat social media platforms as the publisher of another person's content*, thus preventing any state action to hold platforms liable for their enablement of the social media drug trade.[250] Therefore establishing criminal liability for the involvement of platforms in drug dealing would require substantial changes to federal criminal law or allowing states to enact criminal law that is exempt from Section 230(1)(c).

In response to Section 230(1)(c)'s protection applying to platforms involved in sexual exploitation and trafficking,[251] congress enacted the Allow States and Victims to Fight Online Sex Trafficking Act in order to provide effective criminal and civil remedies for prosecutors and victims of sex trafficking.[252] Among the measures taken was the enactment of Section 230(e)(5), which excludes platform immunity from the violation of state criminal law consistent with specific federal provisions[253] as well as from federal civil liability for the violation of federal sex trafficking law.[254] At first glance, this seems like a viable strategy to combat social media's involvement in sex trafficking and could thus serve as a model for a similar provision addressing the social media drug trade.[255] Unfortunately, its application is largely inconsequential, in some places even doing more harm than good.[256]

Because state criminal law needs to be modelled after federal law, the conduct for which criminal liability of platforms could be established most likely will not change, as such behavior would already fall under Section 230(e)(1).[257] Furthermore, similarly to the issues addressed before, the criminal provisions still require a knowing[258] or intentional[259] advertisement, promotion, or other involvement in sex trafficking, which cannot be established for social media

---

250 e.g. Homeaway.Com, Inc. v. City of Santa Monica, 918 F.3d 676, 682 f. (9th Cir. 2019); Backpage.Com, LLC v. Cooper, 939 F. Supp. 2d 805, 821 ff., especially 823 (M.D. Tenn. 2013); Backpage.com, LLC v. McKenna, 881 F. Supp. 2d 1262, 1273 (W.D. Wash. 2012); cf. Dyer (2014), 846, 852, 855; Johnson/Castro (2021), 9 f. w.f.r.

251 Jane Doe No. 1 v. Backpage.Com, LLC, 817 F.3d 12, 18 ff. (1st Cir. 2016) cf. further Backpage.com, LLC v. Hoffman, 9 ff. (D.N.J. Aug. 20, 2013); Backpage.Com, LLC v. Cooper, 939 F. Supp. 2d 805, 821 ff. (M.D. Tenn. 2013); Backpage.com, LLC v. McKenna, 881 F. Supp. 2d 1262, 1274 f. (W.D. Wash. 2012).

252 Allow States and Victims to Fight Online Sex Trafficking Act of 2017, Pub. L. No. 115-164, 132 Stat. 1253, 1253 (2018); 164 Cong. Rec. (2018), H. 1290 f. (statement of Rep. Martha Roby).

253 47 U.S.C. § 230(e)(5)(B) i.c.w 18 U.S.C. § 1591; 47 U.S.C. § 230(e)(5)(C) i.c.w. 18 U.S.C. § 2421A.

254 47 U.S.C. § 230(e)(5)(A) i.c.w 18 U.S.C. § 1595 and 18 U.S.C. § 1591.

255 Green (2023), 80, 83.

256 Cf. generally: Citron (2023), 736 ff.

257 Albert, et al. (2020), 1108; cf. Citron (2023), 740.

258 18 U.S.C. § 1591(a)(2), where advertisement is the only act that cannot be committed recklessly.

259 18 U.S.C. § 2421A.

companies that merely act as information service providers.[260] Therefore, it becomes clear that *expanding the criminal liability of platforms can only be done effectively by lowering its mens rea requirements or by allowing platforms to be held responsible for their role as distributors.*

In that regard, a brief look at the exception for civil claims[261] is warranted, as Section 1595(a) requires only *constructive knowledge*[262] on behalf of the defendant.[263] Unfortunately, courts remain divided on the question of whether this also applies to the required underlying criminal offense,[264] thus creating a situation where legal certainty is severely in jeopardy. However, this provision still manages to demonstrate that adjusting the mental element requirements could be a feasible way to allow for sufficient liability for a platform's involvement in criminal activities. Nonetheless, while this might work in response to specific issues like sex trafficking, in order for this to be efficiently implemented in response to illicit content in general a significant overhaul of a basic principle of criminal law would be required, which neither seems realistic nor desirable given the potential effects such a change could have for the entire doctrine of criminal law.

B. Causes for Concern

All things considered, the current application of Section 230 on social media platforms does not adequately hold them accountable for their involvement in the facilitation of drug dealing. This traces back to two central issues in its execution: On the one hand, Section 230 is largely a *relic from the early days of the internet*, and the consideration of its statutory goals is no longer appropriate in view of the modern internet. On the other hand, the courts' application of the material contribution analysis on algorithms fails to address the exacerbated effects of drugs (and other illicit content) on social media, which are directly caused by algorithmic recommendations.

---

260 Doe v. MG Freesites, Ltd., 7:21-cv-00220-LSC, 32 (N.D. Ala. Feb. 9, 2022); House Report 115-572 (2018), 5; Albert, et al. (2020), 1125, 1148 ff.; Hayden (2023), 438; Lynton (1995), 358.

261 47 U.S.C. § 230(e)(5)(A).

262 "knew or should have known", Garner (2019), 1043; cf. M.H. v. Omegle.com, 8:21-cv-814-VMC-TGW, 19 (M.D. Fla. Jan. 10, 2022); Lynton (1995), 132.

263 Doe v. MG Freesites, Ltd., 7:21-cv-00220-LSC, 32 (N.D. Ala. Feb. 9, 2022); Hayden (2023), 438.

264 Does 1–6 v. Reddit, Inc., 51 F.4th 1137, 1141 (9th Cir. 2022); Doe v. KIK Interactive, Inc., 482 F. Supp. 3d 1242, 1251 (S.D. Fla. 2020); A.B. v. Marriott Int'l, Inc., 455 F. Supp. 3d 171, 188 (E.D. Pa. 2020); A.B. v. Hilton Worldwide Holdings, 484 F. Supp. 3d 921, 936 (D. Or. 2020); Hayden (2023), 421.

1. Statutory Goals: The Illusion of Self-regulation

One of the explicit statutory goals of Section 230 is to "remove disincentives for the development and utilization of blocking and filtering technologies."[265] As explained above, courts have based their extensive interpretation of immunity on, i.a., the promotion of self-regulation and continue to apply the same reasoning to this day.[266] Consequently, it is appropriate to examine efforts and effectiveness of social media companies at self-regulation.

All the major social media companies discussed in Chapter III explicitly prohibit content related to the sale, use, and promotion of illicit substances on their platforms through their terms of service or community guidelines.[267] All the while, drugs are still traded openly on said platforms. This discrepancy can best be understood by examining social media companies' business models and financial incentives. Their main streams of income depend *almost entirely on engagement*, meaning users' *exposure to content and time spent on the platform*; that way, they can present them with monetized advertisements and gather data to further improve targeted advertisements as well as sell user data to data brokers.[268] Thus, a platform's success does not depend on w*hether or not the content it presents to a user is harmful*; *so long as it boosts user engagement*, it will also boost the platform's economic success.[269] In other words, the incentive for self-regulation dreamed up by the legislators remains nothing but an illusion.

Secondly, courts previously argued that the platforms would not be able to moderate the seemingly infinite amounts of data.[270] However, with the rise of deep learning algorithms, automatic detection of illicit content does not only become feasible, but is also not tied to requiring large amounts of human capital.[271] It is telling that social media companies are perfectly capable of employing sophisticated algorithms to recommend content and profiles to users to

---

265 47 U.S.C. 230(b)(4).

266 Gonzalez v. Google LLC, 2 F.4th 871, 941 (9th Cir. 2021); Force v. Facebook, Inc., 934 F.3d 53, 77 (2d Cir. 2019); Carafano v. Metrosplash.com, Inc., 339 F.3d 1119, 1122 f (9th Cir. 2003); Zeran v. America Online, 129 F.3d 327, 331, 333 (4th Cir. 1997).

267 Meta (2023); Reddit Inc. (2024); Snap. Inc. (2024); TikTok (2024).

268 Bergman (2023), 1163; Buiten (2021), 361; Dumas (2022), 1594 f., 1604; Kim (2017), 147 f.; Oranburg (2022), 595; Roth (2021), 22; Unger (2021), 323 ff.; cf. Sadowski (2019), 1 f. w.f.r.

269 Bergman (2023), 1164; Citron (2023), 728 f.; Liu/Yildirim/Zhang (2021), 25; Oranburg (2022), 608 f.; Smith/Van Alstyne (2021).

270 Zeran v. America Online, 129 F.3d 327, 333 (4th Cir. 1997).

271 Cf. Gonzalez v. Google LLC, 2 F.4th 871, 896 f. (9th Cir. 2021).

keep them engaged,[272] thus creating networks of drug sellers and buyers, but fail to effectively employ these to combat harmful content on their platform.[273] As noted in Chapter III, social media platforms have responded in some fashion to the public outcry concerning social media drug dealing, however not with the impetus that would be necessary to prevent the formation of drug markets, despite the existence of the requisite tools. Clearly, monetary incentives overshadow incentives for self-regulation.[274] Thus, it is necessary to ensure that platforms profiting from illicit content are presented with sufficient incentives to engage in effective content moderation by threatening criminal, or at least civil, liability.[275]

Lastly, the internet has grown and been fostered significantly since 1995.[276] Therefore, it appears that Section 230's second statutory goal has already been reached to a sufficient extent,[277] arriving at developmental levels way above what could have been anticipated during its creation.[278] On that account, it is questionable to what extent the congressional goal of Section 230's enactment even remains relevant for today's society. Additionally, it can be reasonably criticized that by protecting a vibrant and free internet, congress has created an absurd situation in which interactive service providers, despite possessing technical means to prevent the distribution of illicit drugs through their platforms,[279] are protected from any liability even when they are knowingly inactive in preventing such transactions and advertisements, simply to protect the Internet's growth while neglecting the serious implications for society, especially adolescents and young adults, as discussed in the third chapter. From that perspective, even applying the *absurdity doctrine*[280], and thus entirely disregarding the plaintext of Section 230, as demanded by some scholars, can seem adequate in response to the severe consequences of its extensive appli-

---

272 Dyroff v. Ultimate Software Grp., Inc., 934 F.3d 1093, 1095 (9th Cir. 2019); Gonzalez v. Google, Inc., 335 F. Supp. 3d 1156, 1162 (N.D. Cal. 2018); Bergman (2023), 1163; Narayanan (2023), 18 ff.; Zakon (2020), 1110.

273 Cf. Force v. Facebook, Inc., 934 F.3d 53, 84 f. (2d Cir. 2019); Cyphert/Martin (2022), 158; McDermott (2023), 13; Tremble (2017), 866.

274 McClure (2022), 353; Oranburg (2022), 608 f.

275 Cf. DOJ (2020).

276 Cf. 18 U.S.C. 230(b).

277 Cf. Anderson/Gottfried/Nolan (2023), 10; Citron/Wittes (2017), 409 f.; Manning/Villareal/Lloyd (2024); Oranburg (2022), 607 w.f.r.; Ortiz-Ospina (2019); Pew Research Center (2024); Wilman (2021), 324.

278 Malwarebytes, Inc. v. Enigma Software Grp. USA, LLC, 592 U. S. _____, 1 (2020); Lisea (2023) w.r.t. Kosseff (2019), 3; Tremble (2017), 844; Wilman (2021), 324.

279 *Supra* fn. 111.

280 Cf. United States v. Kirby, 74 U.S. 482, 487 (1868); Cicchini (2021), 353 f., 361 f.; generally: Manning (2003).

cation based on a plaintext reading.[281] While other, less drastic solutions exist, the fact that disregarding the statutory text completely is among the contemplated options to deal with Section 230(1)(c) clearly demonstrates that its text and judicial interpretation have created an absurdly broad liability shield that cannot withstand the modern internet and its role in the sale and distribution of illicit drugs, goods, and content.

In conclusion, it has to be noted that Section 230 and its statutory goals are largely a remnant of the past founded on naïve predictions of effective self-regulation and the inability to predict the extent of the internet and social media's impact on the commission of certain crimes which are enabled through its virtually all-encompassing liability shield.[282] Therefore, *a reform of Section 230(1)(c) is required to adequately combat the social media drug market.*

2. On the Neutrality of Algorithmic Content Recommendation

This section scrutinizes the judicial interpretation of content recommendation algorithms, demonstrating that under a material contribution analysis the court's dismissal of liability in *Force* and *Gonzalez*, understanding all algorithms as content neutral tools, does not adequately depict the functions performed by said algorithms in the context of social media drug markets and other illicit online content.

To illustrate the issue at hand, consider the following hypothetical[283]: Suppose a website that functions identically to roommates.com, but instead of explicitly forcing its users to disclose information related to discriminatory criteria, it automatically collects user data to create an extensive user profile. Data gathered in such a way might involve what listings and potential roommates they view or hover over and for how long they do so, in what areas they're looking to rent a place, information provided explicitly through profile pictures and descriptions, but also information that users are most likely not consciously sharing, such as IP addresses or even passwords – which would be considered voluntary inputs according to the appellate court in *Gonzalez*.[284] Based on all the information gathered, a deep learning algorithm then presents each user with their best potential roommates making use of *imperceptible categorizations and inferences based on historical and continuously incoming data.*[285] Based on these developments, the algorithm discovers that for some

281 Green (2023), 61 f.
282 McPeak (2021), 1557; Project Syndicate (2024).
283 The hypothetical as a whole stems from: Dumas (2022), 1607 f.
284 Cf. *supra* fn. 239 f.
285 Cf. Bathaee (2018), 892 f.

users, matches are more successful if they're similar in race, religion, sex, familial status, or national origin[286], and thus, the algorithm "steer[s] users based on discriminatory criteria."[287] However, where roommates.com wasn't awarded immunity under Section 230 because it forced its users to disclose discriminatory information and used it to generate the best possible matches, this hypothetical website would be, because it merely "provided a neutral platform that did not specify or prompt the type of content to be submitted, nor determine particular types of content its algorithms would promote."[288]

The only differences between roommates.com and the hypothetical website are that the developer's intent to employ discriminatory criteria and the information required to do so occurred implicitly instead of explicitly.[289] The *underlying forbidden conduct*, however, remains the same. In light of this, it is absurd to treat the same process *once as materially contributing and once not depending on whether a machine or a human commits it*. Similarly, if an algorithm discovers that presenting adolescents and young adults with easily accessible drugs is an effective way to boost engagement[290] and thus does so, the effects of said behavior do not differ from the direct and intentional advertisement of drugs. Moreover, this would incentivize committing cybercrimes automatically, which cannot be the intent of Section 230.[291]

Furthermore, the role of an interactive service provider, depending on his actions, places him on a *spectrum ranging from publisher of third parties to a speaker of his own message*.[292] As discussed previously, courts held that, generally, the use of algorithms is content neutral and consistent with traditional editorial functions.[293] Yet, in reality, neither of these assumptions holds true. The courts' assumption that algorithms are inherently content neutral is grounded in the idea that a platform's feature is sufficiently neutral *if all content is initially processed in the same way*;[294] however, such an understanding of content neutrality is *too broad and overbearing*. From that perspective, even

---

286 Cf. 42 U.S.C. § 3604.

287 Fair v. Roommates, 521 F.3d 1157, 1167 (9th Cir. 2008); cf. regarding the concept of discriminatory algorithms generally: Bornstein (2018), 520 f.; Kim (2017), 888 ff.; Kim/Bodie (2021), 294 ff.; Senate Hearing 117-769, 37, 40.

288 Gonzalez v. Google LLC, 2 F.4th 871, 895 (9th Cir. 2021).

289 Dumas (2022), 1608.

290 Cf. *supra* fn. 268, 270 and 272; Dumas (2022), 1604.

291 Dumas (2022), 1608.

292 McClure (2022), 344; cf. Barnes v. Yahoo!, Inc., 565 F.3d 560, 566 (9th Cir. 2009).

293 Cf. *supra* fn. 236 ff.

294 Gonzalez v. Google LLC, 2 F.4th 871, 896 (9th Cir. 2021); Force v. Facebook, Inc., 934 F.3d 53, 70 (2d Cir. 2019); Marshall's Locksmith Serv. Inc. v. Google, LLC, 925 F.3d 1263, 1270 f. (D.C. Cir. 2019).

human vision and perception would be content neutral, so long as the same pair of eyes and brain is used to see and process information.[295] From my perspective, an algorithm that recommends content is inherently not and cannot be content neutral, as its exact purpose is to match the information derived from specific content with the user's interest deduced from the data gathered by the platform.[296] It is *frankly absurd to envision a content recommendation algorithm that is content neutral in a way that does not account for the information contained in the content it recommends*.

This effect is further amplified by the fact that the human brain is extremely susceptible to algorithms.[297] By creating and making use of their *engaging and influential digital space*, social media not only amplifies the reach of drug dealers' advertisements but also increases their potency, thus significantly augmenting the published message and its illegality,[298] which also cannot be considered a content neutral form of distribution.

Lastly, understanding algorithmic content recommendations as part of traditional editorial features, functioning similarly to search engines, does not account for the fact that through such recommendations, social media platforms actively influence a user's experience; by promoting and amplifying certain content the platforms take an affirmative role in the distribution of said content that goes beyond a traditional editor's role.[299] Additionally, a recommendation inherently holds informational value beyond the content it recommends.[300] This is precisely why treating such algorithms analogously to traditional search engines is inconsistent. Consider the following[301]: A person looks for a specific book in a library and asks the librarian where it can be found, to which the librarian provides directions. A standard search engine functions in such a way, directing a user to content he or she actively searched for through *voluntary inputs*. In other words, a search engine *replicates information that already exists*, namely "where" the content a user is looking for can be found.

---

295 Cf. Dumas (2022), 1604.

296 Aggarwal (2016), 139 ff.; Lops/de Gemmis/Semeraro (2011), 73, 75, 80; Narayanan (2023), 23 f.; Schafer/Konstan/Riedl (2001), 137, 139 f.

297 Cf. though these primarily relate to search engines, the reasoning remains the same: Corbyn (2012); Epstein/Li (2024), 9 f.; Epstein/Robertson (2015), 4519 f.; Kramer/Guillory/Hancock (2014), 8788 ff.

298 Tremble (2017), 862.

299 Gonzalez v. Google LLC, 2 F.4th 871, 914 f., 921 f. (9th Cir. 2021), note however: "As the majority opinion explains, our case law squarely and irrefutably holds otherwise."; Force v. Facebook, Inc., 934 F.3d 53, 76 f., 80 ff. (2d Cir. 2019); Hoye (2023), 178, 182; McClure (2022), 250; Tremble (2017), 862.

300 Force v. Facebook, Inc., 934 F.3d 53, 82 (2d Cir. 2019).

301 Cf. for this example: Force v. Facebook, Inc., 934 F.3d 53, 76 (2d Cir. 2019); Dumas (2022), 1609.

If, in the same scenario, the librarian instead, based on all information available to him, which involves both books the person has read but also other factors, such as, i.a., age, gender, and race, recommends another book to the person, which is precisely the function of a content recommendation algorithm, the librarian *synthesizes and creates new information*, namely that the librarian believes that the person would expectedly like the recommended book. On the whole, *social media companies become, at least partially, speakers of their own message by virtue of their usage of content recommendation algorithms, and thus, they should be placed on that side of the spectrum and treated as such.*

Furthermore, while prioritizing what information to present and in what order it is presented clearly is an editorial function performed, e.g., by newspapers when deciding what story to present on the title page,[302] an automated and individualized recommendation algorithm can no longer be compared to its classical editorial roots. Such an individualized recommendation not only *generates new information* but also *occurs and adapts continuously without direct and conscious human involvement*, which extends beyond the scope of the classical editorial function of prioritizing information.

C. Approaches for Reform

As demonstrated, the current application of Section 230 to social media companies creates an overbearing liability shield, thus protecting their tacit involvement in illegal activities, such as the sale of illicit substances. As further illustrated, machine learning solutions are well equipped to effectively detect drug related content. It could, therefore, be reasonable to abolish Section 230 altogether, at least concerning drug related content. However, this could result in unwanted consequences, as such automated moderation requires capital and human resources to set up and run effectively and could substantially hinder small and niche information content providers, thus having a chilling effect on the overall diversity of the internet landscape.[303] Additionally, while technologically possible, automatic detection and removal of content on social media is always accompanied by the fear of online censorship.[304] Lastly, while this would open the floodgates for civil liability of social media platforms and thus at least provide a financial incentive to moderate content, it does not address the issue associated with the requirement of direct intent for criminal

---

302 Cf. Miami Herald Pub. Co. v. Tornillo, 418 U.S. 241, 258 (1974).

303 European Commission (2020), 19; Wilman (2023), 45; Wilman (2021), 325; Cf. Smith v. California, 361 U.S. 147, 154 (1959); Goodman/Whittington (2019), 3; Wilman (2022), 6 f.

304 Cf. Angelopoulos (2020), 314; Dergacheva/Katzenbach (2024), 363; Frosio/Geiger (2023), 76; Meaker (2019); O'Brien/Malcom (2018); Schulze (2019); Wenger (2018).

liability.[305] It bears noting, however, that especially for issues associated with civil liability and algorithms, other creative approaches, such as formulating civil claims under product liability,[306] exist, though an in depth discussion lies beyond the scope of this paper.

This section thus focuses on notice and takedown mechanisms, specifically as found in the newly enacted EU Digital Servies Act, as potential ways to establish criminal liability based on social media platforms' inaction in response to notices of illicit content. This is specifically relevant in the context of Section 230, as the Digital Millennium Copyright Act (DMCA)[307] employs such a mechanism and is among its exceptions under paragraph e.[308]

1. Brief Overview of Notice and Takedown Procedures under the DSA[309]

In its essence, the DSA awards hosting service providers with a "safe haven" for the hosting and distribution of third party content, functioning similarly to Section 230(1)(c).[310] However, the immunity afforded by the DSA only applies so long as the provider either does not know that the content is illegal or infringing, or they promptly remove or block access to that content once they become aware of it.[311] In the same vein, the DSA's immunity provisions are generally all encompassing, shielding platforms from criminal, civil, and administrative liability equally.[312]

---

305 Dumas (2022), 1613; cf. Reed/Kennedy/Silva (2016), 26.

306 Lemmon v. Snap, Inc., 995 F.3d 1085 (9th Cir. 2021); Bergman (2023), 1190 ff.; Lisea (2023); 804 ff.

307 17 U.S.C. 512(c); cf. generally Hayden (2023), 449 ff.

308 18 U.S.C. 230(e)(2).

309 Note that the DSA's notice and takedown mechanism functions as an expansion of the e-commerce directive, thus court decisions as well as legislative information concerning the e-commerce directive also apply to the DSA; cf. Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market, OJ L 178, 1–16; Buri/van Hoboken (2021) 14; Church/Pehlivan (2023), 55; Wilman (2023), 37 f.; Wolters/Gellert (2023), 404.

310 Art. 6(1) DSA; Buri/van Hoboken (2021), 14.

311 Art. 6(1)(a) and (b) DSA; Church/Pehlivan (2023), 55; Crawford, et al. (2023), 5; Wilman (2022), 4; cf. Judgement of 22. June 2021, Frank Peterson v Google and Elsevier v Cyando, C-682/18 and C-683/18, ECLI:EU:C:2021:503, § 111 ff.

312 Rec. 17 Preamble DSA; Opinion of Advocate General Szpunar delivered 16. March 2016, Tobias Mc Fadden v Sony Music Entertainment Germany GmbH, C-484/14, ECLI:EU:C:2016:170, § 64; Buiten (2021), 366; Commission of the European Communities (1998), 27, 29.

Materially, the DSA's conditional immunity applies to mere conduit, caching, and hosting services.[313] This clearly involves social media platforms as "services that involve the transmission and storage of user-generated content."[314] Nonetheless, the DSA excludes intermediary service providers from its immunity as soon as they play an active role in the processing of data to the extent that they exhibit knowledge or control over the illegal content.[315] This is comparable to Section 230's loss of immunity through material contribution, in the sense that conditional immunity is lost if "the provider selects the stored information, if it is actively involved in the content of that information in some other way or if it presents that information to the public in such a way that it appears to be its own."[316] Mirroring the United States' doctrine, platforms keep their immunity even if they engage in algorithmic for profit filtering, sorting, and optimizing of third party content.[317] Though this is factually wrong for the reasons presented above, the issue in this context is far less egregious, as the DSA ensures that platforms act against illicit content. In my view, *where platform immunity is appropriately limited, it is reasonable to apply it to algorithmic processing of content, as this provides legal certainty for the enormous industry that relies on such processing*.[318] However, in the case of an all-encompassing immunity under Section 230, extending such immunity to algorithms creates a wildfire-like spread of illegal content without any real incentives for platforms to prevent this.

Continuing the material examination, immunity is lost for the conscious hosting of all types of illegal content, where what constitutes the illegality of the content is subject to the applicable national law.[319] As all member states of the EU are participants of the 1998 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances,[320] which criminalizes, i.a., the offering and sale of drugs, according to Art. 3(1)(a)(i), advertisements of drugs are obviously illegal content in all countries in the EU. In other words,

---

313 Art 4 – 6 DSA; Cf. Art. 3(g)(i) – (iii) DSA; Church/Pehlivan (2023), 55.

314 Wilman (2022), 1; cf. Judgement of 3. October 2019, Glawischnig-Piesczek v Facebook Ireland, C-18/18, ECLI:EU:C:2019:821, § 22; Husovec (2023), 903; Husovec/Roche Laguna (2022), 2.

315 Cf. Judgement of 12. July 2011, L'Oréal v. eBay, C-324/09, ECLI:EU:C:2011:474, § 113; Wilman (2023), 40; Wilman (2022), 6.

316 Opinion of Advocate General Saugmandsgaard Øe delivered 16. July 2020, Frank Peterson v Google and Elsevier v Cyando, C-682/18 and C-683/18, ECLI:EU:C:2020:586, § 152, w.r.t. Judgement of 11. September 2014, Sotiris Papasavvas v O Fileleftheros Dimosia Etaireia, C-291/13, ECLI:EU:C:2014:2209, § 45 f.

317 Buiten (2021), 371.

318 Cf. Frosio/Geiger (2023), 39 f.

319 Rec. 12 Preamble DSA; Husovec/Roche Laguna (2022), 11; Wolters/Gellert (2023), 404.

320 Cf. United Nations (1988).

under the DSA, social media platforms lose their immunity as soon as they are made aware of drug related content on their platform and fail to remove said content expeditiously.

In order to ensure the effective implementation of its immunity, the DSA imposes all intermediary service providers with various tiers of obligations, which depend on the service provider's size and service type.[321] Among these obligations, Art. 16(1) DSA crucially requires all hosting providers to ensure effective notice and takedown mechanisms are in place. Therefore, allowing all users of hosting providers to submit a notice of illegal content to the platform which leads to the platform having obtained knowledge of the alleged illegal content, thus making them potentially liable for not removing said content under Art. 6(1) DSA.[322] Furthermore, providers are obliged to respond to such reports in a *timely, diligent, non-arbitrary, and objective manner*.[323] In order to enforce these obligations, Art. 52(3) DSA threatens fines of up to six percent of a platform's worldwide annual turnover for failing to comply with them.[324]

A mere report, however, cannot directly trigger a hosting provider's duty to remove illegal content. On the one hand, this requires that the notice *is sufficiently precise and adequately substantiated*, following the requirements as provided by Art. 16(2)(a) – (d) DSA. On the other hand, to prevent platforms from pre-emptively blocking content that might be illegal under specific circumstances (*overblocking*[325]), content only needs to be removed where *its illegality is clear in that it requires no detailed legal examination*.[326] Lastly, while the DSA does not require content moderation by the platform's own initiative, if the platform engages in such monitoring and becomes aware of illegal content, they are equally obliged to remove it or lose its immunity.[327]

---

321 Buiten (2021), 367 f.; Church/Pehlivan (2023), 54 f.; Judgement of 3. October 2019, Glawischnig-Piesczek v Facebook Ireland, C-18/18, ECLI:EU:C:2019:821, § 225; Wilman (2022), 3; cf. Art. 16 ff. DSA.

322 Art. 16(3) DSA; Buri/van Hoboken (2021), 21; Husovec/Roche Laguna (2022), 6; Wilman (2022), 8; Wolters/Gellert (2023), 413.

323 Art. 16(6) DSA.

324 Cf. Church/Pehlivan (2023), 58.

325 Maaß/Wortelker/Rott (2024), 5; Pohlmann/Barbaresi/Leinen (2023), 406.

326 Art. 16(3) DSA, cf. Judgement of 26. April 2022, Republic of Poland v European Parliament, Council of the European Union, C-401/19, § 91; Judgement of 22. June 2021, Frank Peterson v Google and Elsevier v Cyando, C-682/18 and C-683/18, ECLI:EU:C:2021:503, § 115 f.; Judgement of 12. July 2011, L'Oréal v. eBay, C-324/09, ECLI:EU:C:2011:474, § 122.

327 Crawford, et al. (2023), 5; Wilman (2023), 43, 46 f.

2. Amending Section 230 with a Notice and Takedown Mechanism

The idea of adopting a notice and takedown mechanism in order to limit the extensive immunities provided by Section 230 is neither new nor novel.[328] This section provides a description of the key advantages of a notice and takedown system, as opposed to Section 230(1)(c), in the context of criminal liability for the advertisement and sale of illicit substances.

The first and most important advantage of a notice and takedown mechanism is that it creates an *institutionalized system that is sufficient to establish knowledge of the illegal content and, thus, intentional inaction*.[329] This overcomes the large issue of Section 230's immunity, which virtually bars all criminal liability of internet service providers, as criminal law's direct intent requirement cannot be proven in the context of hosting third party content. Additionally, notice and takedown regimes *avoid the issue of forcing platforms to overbearingly monitor all content they host*, which, while possible, remains undesirable. In short, notice and takedown mechanisms provide a solid middle ground between all involved actors,[330] which provides intermediary service providers with adequate immunity to run their businesses.[331] All the while, it protects users and society from harmful illegal content by establishing grounds to demonstrate criminal liability.

Secondly, European practice demonstrates that notice and takedown mechanisms function quickly and efficiently to prevent the rampant spread of illicit content.[332] This effect cannot be attributed to immunity under Section 230, as even where liability might be established, this requires lengthy court proceedings during which the illegal content might already have spread further.

Additionally, despite existing for over 20 years, the notice and takedown mechanism set out in the DSA and the e-commerce directive are still largely and widely supported despite the internet's significant evolution in this timeframe.[333] The same cannot be said about Section 230's naïve and outdated perspective on the internet and its trajectory. While one cannot reproach the legislators of Section 230 for their shortsightedness with respect to the internet's

---

328 Balkin (2018), 2046; Mendenica/Wahab (2007), 265 ff.; Roter (2017), 1404 ff.; cf. Batzel v. Smith, 333 F.3d 1018, 1032 fn. 19 (9th Cir. 2003); Internet Platform Accountability and Consumer Transparency Act, S. 483, 118th Congress (2023-2024), Sec. 5 f.

329 Cf. Sanchez v. France, App. No. 45581/15, § 94 f. (ECtHR, September 2. 2021).

330 Wilman (2021), 326; Wolters/Gellert (2023), 418 f.

331 Cf. *supra* V. a. 1.

332 European Commission (2016), 9 f.; Reynders (2021); Wallberg (2017), 933; cf. Urban/Karaganis/Schofield (2017), 114 for an American perspective.

333 De Streel/Husovec (2020), 47; Frosio/Geiger (2023), 75 f.; Nordemann (2020), 46; Urban/Karaganis/Schofield (2017), 28.

rapid development in the past 20 years, its already existing issues will likely be amplified further as the internet develops and likely gains more relevance for the sale of drugs. Although it remains to be seen whether notice and takedown mechanisms will suffice as an answer to further advancements of the internet, they will surely be better suited to address its issues than a provision that already fails at preventing the spread of illegal content today.

Lastly, from a practical perspective, Section 230 does not only already know an exception for notice and takedown mechanisms with respect to copyright infringement, but the provisions of the DSA and e-commerce directive were largely inspired by the DMCA.[334] Therefore, many of the underlying principles and ideas also stem from United States Law and can easily be implemented into a reformed Section 230 or function as a suitable replacement.[335]

3. Addressing the DSA's Weaknesses: a Few Remarks

As demonstrated, notice and takedown mechanisms currently seem to be the most effective solution to navigate the issues associated with the liability of hosting platforms for illegal third-party content. The DSA's modern framework provides a suitable middle ground, where platforms do not have to engage in *overblocking in order to avoid liability*, but they also *cannot hide behind an all-encompassing liability shield and profit from the proliferation of illicit* content on their platforms. However, certain aspects of the DSA provide grounds for reasonable concern, which should be considered globally in the adoption and expansion of notice and takedown mechanisms. This section provides an overview of the apparent weaknesses of the DSA. Having said that, they are not meant as a comprehensive and in-depth discussion but to provide talking points for further deliberation, as these issues have not yet been subjected to widespread academic attention.

Primarily, its worthy of critique that the DSA does not require platforms to ensure that removed content does not reappear ("*notice and stay down*"), instead opting to merely oblige platforms to suspend repeat offenders according to Art. 23(1) DSA.[336] However, a notice and stay down mechanism is currently impossible without permanent automatic screening of content,[337] which the DSA

---

334 Husovec (2023), 891; Wilkert (2021), 318; Peguera (2009), 482; Polański (2018), 871; Urban/Karaganis/Schofield (2017), 21 f.

335 Cf. Bambauer (2014), 2055; Citron (2023), 756; Horowitz (2007); Husovec (2023), 887.

336 Judgement of 3. October 2019, Glawischnig-Piesczek v Facebook Ireland, C-18/18, ECLI:EU:C:2019:821, § 41, 46 f.; Frosio (2017), 43 ff.; Wilman (2021), 330; cf. generally: Husovec (2018).

337 Husovec (2018), 77, 79.

prevents for sensible reasons discussed previously. Nonetheless, it remains a significant issue in the prevention of the spread of illicit content that removing content cannot guarantee under any circumstances that it will not be reuploaded, which makes content moderation an almost Sisyphean task.

Secondly, the effectiveness of notice and takedown mechanisms largely depends on users' reports of illicit content. Especially with respect to content, such as drug advertisements, that does not cause direct individual but rather *public harm*; it remains to be seen how often users will go out of their way to report such content.[338] Potential solutions to this problem already exist, e.g., through government and non-government agencies that inform platforms about illicit content on their platforms, such as the National Center for Missing and Exploited Children.[339] It bears noting in that regard that the adoption of notice and takedown mechanisms for illicit content should clearly diverge from the DMCA's model, which only allows notices by an authorized person on behalf of whoever's rights were infringed,[340] if it also aims to address public harm.

Lastly, it remains questionable that the DSA's conditional immunity is not itself tied to fulfilling the obligations set down in Art. 16 ff. DSA.[341] Especially as experience from other sections of the law, namely the GDPR[342] and competition law, shows that these fines may not have the desired deterring effects.[343] What might be particularly problematic in this regard is that by not complying with the obligations to put a notice and takedown mechanism into place, a hosting provider *could avoid all liability because there is no way to establish that this provider had knowledge of the illicit content*, thus effectively creating the same issue caused by section 230. The practical relevance of this issue, however, remains to be seen, as all major social media platforms described in Chapter III currently comply with the DSA's requirements.[344] Furthermore, some concerns are already being voiced, claiming that even the DSA's liability regime does not effectively prevent illegal content, viewing it only as a *step in the right direction*.[345]

---

338 Wilman (2021), 330.
339 Ibid.
340 17 U.S.C. 512(c)(3)(a).
341 Buiten (2021), 370.
342 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, OJ L 119 4.5.2016, 1 – 78.
343 Wagner/Janssen (2021).
344 Cf. Reynders (2021), 2 f.
345 Project Syndicate (2024).

V. Conclusion

Drug markets have long been early adopters and users of newly emerging technologies, be it e-mails or mobile phones, the continual and rapid development of social media and e-commerce being the latest adoption of this trend. Algorithmic content recommendations now allow market participants to expand and create their illicit networks beyond what could ever be possible in an analogue setting by employing these technologies. Furthermore, social media drug markets' key advantages involve ease of access and familiarity of use, as well as rapid deliveries, with delivering drugs being quicker than a pizza in many places around the world.[346] Notably, digital drug markets can be attributed to the same categories as set out by Eck's taxonomy of illicit markets in general, with one key exception: *Shifting between market types is not only very easy but appears to be a defining feature of social media drug markets.* Public Markets, which are found on all major social media platforms, serve primarily as a space for advertisement, where sellers and buyers are connected by content and profile recommendation algorithms. The much more secure private market, which occurs almost entirely on end-to-end encrypted messaging services, is then used to finalize the transaction and organize a physical meeting where drugs and money are exchanged. Understanding these synergies and connections between different platforms is essential to combat the social media drug trade. Clearly, the emergence of social media drug markets necessitates an all-encompassing liability framework because such a market can only be limited through the combined social media ecosystem, as one platform upholding high moderation standards can, at best, lead to a dispersion of the market to new platforms. Nonetheless, all of these observations are still limited by the sparse academic attention to the topic of this work, making it crucial for further widespread analysis and academic discussion of social media drug markets.

A critical preliminary finding appears to be that social media drug markets target young and inexperienced people who show excessive signs of psychological distress as well as low self-control, thus having a general disposition to engage in illicit activities and street crimes. Combining this with the potential for social media drug markets to present adolescents and young adults with opportunities to engage in criminal behavior and the apparent glorification of the drug dealers' lifestyle through social media, there might be a significant risk of social media drug markets functioning as a slippery slope for further adoles-

346 Winstock (2017).

cent criminality. Understanding and further examining these risk factors associated with social media drug markets should, therefore, be a high priority for academic research and general legislative action in this field.

While a plethora of solutions to combat issues related to drug consumption and dealing exist, among which decriminalization and legalization clearly play a central role, so long as the drug trade is neither state mandated nor regulated, criminal law needs to be a powerful tool to prevent social media's tacit involvement in and profit from their enablement of the drug trade. As demonstrated by Eck's framework, public markets are largely dependent on the absence of managers, preventing the formation of said markets. In the digital context, social media platforms and their content moderation could fulfill the role of managers; however, the United States' notion of platform responsibility under Section 230(1)(c) creates an overbearing liability shield that does not incentivize platform providers to effectively prevent the sale and distribution of illicit content in general. Furthermore, Section 230's application expresses significant flaws by holding on to naïve statutory goals that have long been reached or proven to be futile. Additionally, the application of the material contribution test, treating content recommendation algorithms as content neutral tools, diverges entirely from reality and does not address the added harm caused by algorithms in the context of social media drug markets and other illicit content. Lastly, a fundamental issue with the enforcement of criminal law in the context of social media platforms as intermediaries and enablers of crime is that the mens rea requirement of intent, which demands knowledge with regard to the crime, cannot be established given the immense amount of content uploaded to social media websites daily. Thus, adequate criminalization of social media platforms would either require a generally lower mens rea standard or a substantial overhaul of Section 230 so that it no longer *virtually immunizes social media platforms that profit from illegal content.*

Conditional immunity and notice and takedown procedures, as set out in the DSA and the DMCA, present a viable solution to both these issues, as they provide a solid middle ground between the interest of social media platforms and the prevention of crime, without forcing platforms to engage in automated screening of all content, thus carrying the risk of censorship through overblocking. Additionally, notice and takedown mechanisms also serve as an institutionalized procedure to substantiate a platform's knowledge of specific instances of illicit content and thus allow the establishment of intent and criminal liability without having to modify the mens rea requirement as its fundamental component. In conclusion, the United States' conception of platform immunity for user-generated content needs a major overhaul. In doing so, it should borrow the fundamental aspects from the DSA's modern notice and

takedown procedure in order to prevent the rampant spread of drug advertisement on social media and provide a sound framework to establish criminal liability for social media platforms' tacit involvement and profiteering.

Next Generation

This publication provides an exploratory overview of newly emerging digital drug markets as well as a critical discussion of criminal responsibility of platforms for hosting user-generated content under 47 U.S.C. § 230 in light of the newly enacted EU Digital Services Act.

Niklaus Julian Sempach