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CLASSIFYING ALTERNATIVE APPROACHES FOR SIMPLE DRUG POSSESSION: A TWO-LEVEL TAXONOMY

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ABSTRACT

Background: Increasing international attention is being given to alternative measures to criminalization for the possession of illicit drug. Such schemes are heterogeneous and a clear conceptual framework for their discussion and analysis is lacking.

Aim: To present a conceptually informed, empirically based taxonomy for the classification of alternative measures to decriminalization for the possession of drugs.

Methods: The research uses qualitative comparative analysis (QCA) of existing alternative measures. It proceeds from analysis of existing distinctions between and classifications of alternative measures. It uses data from a realist review of alternative measures in nine countries (Australia, Czech Republic, Denmark, Germany, Jamaica, Netherland, Portugal, UK and USA) to derive three dimensions of comparison (whether they: are *de jure* or *de facto*; involve diversion to an educative, therapeutic of social service; involve the use of civil/administrative sanctions). A QCA truth table using data from twenty-six schemes in the nine countries is used to identify types in the taxonomy. The types are grouped – using pragmatic reduction informed by Boolean minimization – across a smaller number of classes in order to create a two-level taxonomy.

Results: The resulting taxonomy contains six types of alternative measures: depenalization; *de facto* diversion; *de jure* diversion; decriminalization with diversion and civil sanctions, decriminalization with civil sanctions; and decriminalization with no sanctions. The six types fall into three classes: depenalization; diversion; and decriminalization. It is possible to classify emerging alternatives into this new taxonomy.

Conclusion: Conceptually informed empirical observation of cases enables the construction of a two-level taxonomy of alternative measures to criminalization for the simple possession of drugs. This may facilitate clearer and better-informed discussion of alternatives to criminalization for drug possession.

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I. INTRODUCTION

In studying policy and law on controlled substances, we need to make "shared conceptual frameworks explicit in order to reduce fragmentation, clarify constructs, and thereby advance the field."[1] As Professors Room, Fischer, Hall, Lenton, and Reuter note, there is considerable heterogeneity between illicit drug policy regimes and a lack of stable frameworks for their analysis.[2] Taxonomies offer the possibility to provide such conceptual clarity on the basis of empirically observed differences between policy regimes.[3] Creating a clear and precise taxonomy of different regulatory forms for dealing with people who are found to be in possession of drugs is essential to the type of "scientific legal mapping" that is needed to improve knowledge of the interaction between law and public health.[4]

With burgeoning political and academic interest in alternatives to criminalization for the simple possession of illicit drugs, the need for a taxonomic classification of various alternatives increases. In 2019, the coordinating body of the United Nations called on members states to promote "alternatives to conviction and punishment in appropriate cases, including the decriminalization of drug possession for personal use."[5] In the United States, many states have decriminalized the possession of cannabis.[6] Oregon has recently decriminalized the possession of all controlled drugs, and Washington is discussing plans to follow suit.[7]

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1. Robert West, John Marsden & Janna Hastings, *Addiction Theories and Constructs: A New Series*, 114 ADDICTION 955–956, 955 (2019).

2. ROBIN ROOM ET AL., CANNABIS POLICY: MOVING BEYOND STALEMATE 48 (2010).

3. Kevin B. Smith, *Typologies, Taxonomies, and the Benefits of Policy Classification*, 30 POLICY STUD. J. 379 (2002).

4. Scott Burris, Lindsay K. Cloud & Matthew Penn, *The Growing Field of Legal Epidemiology*, 26 J. PUB. HEALTH MGMT. PRAC. S4, S6 (2020).

5. Rep. of the U.N. Chief Execs. Bd. for Coordination, at 14, U.N. Doc. CEB/2018/2 (2018).

6. *See e.g., Initiative 44 full text*, OR. SEC'Y OF STATE 1, 7 http://oregonvotes.org/irr/2020/044text.pdf (breaking down Oregon's entire Drug Addiction and Recovery Act).

7. *See id.; See also* H.B. 1499, 67th Leg., 2021 Reg. Session (Wash. 2021); *but see* S.B. 5476, 67th Leg., 2021 Reg. Session (Wash. 2021) (reintroducing criminal penalties for drug possession after the Washington Supreme Court declared Washington's drug possession law invalid).

These approaches to drug possession[8] are conceptually and practically distinct from the legalization and regulation of supply, although they are often confused with it. For example, the BBC reported on The Marijuana Opportunity Reinvestment and Expungement ("MORE Act") Bill which passed the US House of Representatives in December 2020 as a case of "decriminalization."[9] It actually goes beyond decriminalization of possession to propose a legal framework for the sale of cannabis. Such legalization remains in clear breach of the UN drug conventions, remains contrary to US federal law as the MORE Act has not passed the Senate, and is outside the scope of this article. As shown by the BBC's report on the More bill, many reforms are often brought together under the heading of "decriminalization."[10] Another example is North Dakota's 2019 reduction of criminal penalties for marijuana possession.[11] This is sometimes referred to as decriminalization, but it retains criminal law sanctions for possession of small amounts, and even the possibility of imprisonment for repeat offenders.[12] Can a reform that maintains criminalization really be described as *de*criminalization?

Various definitions of this term have been provided. For example, Sebastian Scheerer defined it as "the adjustment of moral boundaries to social change."[13] This is a very broad category indeed. It is too broad for use in scientific or policy discussions of alternatives to criminalization. We need more specific descriptions of the types of reform that can be implemented.

In this article we discuss some of the previous efforts to distinguish between alternatives to criminalization for drug possession. We then present our methods for developing a policy taxonomy, based on qualitative comparative analysis (QCA) of twenty-six alternative schemes in nine countries which we included in a realist review.[14] We show the resulting two-level taxonomy and use it to describe new alternatives which have emerged in the USA, Ireland and Norway since we

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8. Some jurisdictions criminalize the use as well as the possession of illicit drugs. For ease of expression, references to drug possession offences in this article should be taken to include drug use offences.

9. *US House Passes Federal Cannabis Decriminalisation Bill*, BBC (Dec. 4, 2020), https://www.bbc.co.uk/news/world-us-canada-55191808.

10. *Id.*

11. North Dakota Laws and Penalties, NORML, https://norml.org/laws/north-dakota-penalties-2/ (last visited May 10, 2021).

12. *Id.*

13. Sebastian Scheerer, *The New Dutch and German Drug Laws: Social and Political Conditions for Criminalization and Decriminalization*, 585 LAW & SOC'Y REV. 585, 586 (1978).

14. Alex Stevens, et al., *Depenalisation, Diversion and Decriminalisation: A Realist Review and Programme Theory of Alternatives to Criminalisation for Simple Drug Possession*, EUR. J. CRIMINOLOGY, Nov. 28, 2019, at 6-10.

carried out the realist review. We discuss the application and limitations of this taxonomy before concluding that it provides a valuable framework for classifying alternatives, bringing some conceptual clarity to a previously confused area of study.

II. DISTINCTIONS AND CONFUSIONS BETWEEN ALTERNATIVE MEASURES

Attempts to define alternatives to criminalization for simple possession of drugs go back, at least, to the US National Commission on Marihuana and Drug Abuse (the "Schaffer commission") in 1972.[15] This defined decriminalization as "those policies in which possession of marijuana for personal use or casual distribution of small amounts for no remuneration was not considered a criminal offense."[16] However, this definition did not adequately cover some of the U.S. states that were widely described as having decriminalized cannabis possession in the 1970s.[17] For example, California and North Carolina retained criminal penalties for cannabis possession in that decade, despite commonly being described as having decriminalized marijuana in that era.[18] This points to a first possible confusion in description of alternative measures; do they involve a change in the law so as to avoid a conviction for possession under criminal law?

Another potential source of confusion in descriptions of alternative measures is between the removal of criminalization and the elimination of *any* form of punishment. For example, Professor Douglas Husak states that in the context of decriminalization "the use of a given drug would not be a criminal offence."[19] But he also writes that decriminalization is synonymous with the absence of punishment.[20] This, again, would not clearly identify the policies which have been described as decriminalization in the U.S. Most (but not all) of these states have retained sanctions for cannabis possession, even if they have stopped treating it as a criminal offence. Ammerman et al. define decriminalization rather as "the

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15. Rosalie L. Pacula, Jamie F. Chriqui & Joanna King, Marijuana decriminalization: What does it mean in the United States? 7 (Nat'l Bureau of Econ. Rsch., Working Paper No. 9690, 2003) https://www.nber.org/system/files/working_papers/w9690/w9690.pdf.

16. *Id.*

17. *Id.*

18. *Id.*

19. Douglas Husak, *Four Points About Drug Decriminalization*, 22 CRIM. JUSTICE ETHICS 21, 22 (2003).

20. *Id.*

reduction of criminal offenses for the possession of small amounts of the marijuana plant to a misdemeanor, infraction, or civil penalty."[21]

A third area of potential distinction between alternative approaches for dealing with possession relates to whether they include the possibility of diverting the person who is found in possession of drugs to educative, therapeutic or social service interventions.[22] This is, for example, included in the 2013 European Action Plan on Drugs, which committed European Union members states "to provide . . . alternatives to coercive sanctions (such as education, treatment, rehabilitation, aftercare and social integration) for drug using offenders."[23] Such diversion can happen at several stages of the criminal justice process (e.g. pre-arrest, pre-charge/indictment, pre-trial, sentencing).[24] Here, we cover only those that actually act as an alternative by avoiding a criminal conviction (this excludes, for example, drug courts).[25]

Yet another distinction arises from the drugs to which these alternatives are applied. In most historical cases, including in the U.S., cannabis (marijuana) is the only illicit drug which was included in alternative schemes. Other countries, including Portugal and Germany, have exempted the possession of small quantities of any illicit drug from criminalization. And there are also some idiosyncratic combinations, such as the 2013 extension of the cannabis warning scheme in England and Wales to cover khat due to concerns about its use in communities originating in East Africa.[26]

There are also quantitative distinctions between schemes. These include: the amount of a drug that is considered 'small' or legally tolerable to possess; the number of times that a person is allowed to benefit from the scheme (e.g., first, second, or third offences only, or all offences); and the age at which they begin

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21. Seth Ammerman, et al., *The Impact of Marijuana Policies on Youth: Clinical, Research, and Legal Update*, 135 PEDIATRICS e769, e775 (2015), http://pediatrics.aappublications.org/cgi/doi/10.1542/peds.2014-4147.

22. ROOM ET AL., *supra* note 2, at 48.

23. *EU Action Plan on Drugs 2013-2016*, at 9 (Nov. 30, 2013) https://www.emcdda.europa.eu/attachements.cfm/att_225552_EN_EU%20drug%20action%20pl an.pdf.

24. *See, e.g.*, Smith, *supra* note 3; Scheerer, *supra* note 13.

25. *See, e.g.*, DRUG COURTS: IN THEORY AND IN PRACTICE (James L. Nolan, Jr. ed., 2002) (discussing focused empirical studies and analysis on the benefits of drug courts).

26. *See* Alex Stevens & Fiona Measham, *The "Drug Policy Ratchet": Why do Sanctions for New Psychoactive Drugs Typically Only Go Up?*, 109 ADDICTION 1226, 1228 (2014).

to apply.[27] Some apply to all citizens, some only to adults over eighteen, and some to those over twenty-one.[28]

All these distinctions suggest a need to provide a classification of alternative measures which incorporates multiple dimensions that are chosen carefully through a combination of conceptual and empirical consideration.

III. METHODS

Our intention is not to provide a scale to compare policies on how strict they are, as is provided by Karlsson and Österberg[29] for alcohol and by Chapman and Schmidt[30] for medical marijuana regulatory regimes. Neither do we intend to provide a conceptually derived typology,[31] such as that developed by Professors Room, Fischer, Hall, Lenton, and Reuter for cannabis policy reform.[32] Rather, we seek to provide a taxonomy based on actually existing forms taken by alternative measures for dealing with the possession of drugs. This, therefore, requires a systematic method of qualitative, empirical comparison. Qualitative comparative analysis (QCA) has previously been used to classify, for example, types of welfare reform and media regulation policies.[33] QCA combines close study of actual cases with a systematic method for classifying such cases on the basis of common dimensions or conditions.[34] This comparison is carried out through the creation of a "truth table" which uses the presence or absence of specified conditions in actual cases to allocate these cases to sets that share the same configuration of

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27. *See, e.g.*, Niamh Eastwood, Edward Fox, & Ari Rosmarin, *A Quiet Revolution: Drug Decriminalisation Policies in Practice Across the Globe,* DRUGS, THE LAW & HUMAN RIGHTS (Mar. 2016) https://www.release.org.uk/sites/default/files/pdf/publications/A%20Quiet%20Revolution%20-%20Decriminalisation%20Across%20the%20Globe.pdf (discussing the differences between drug classification schemes among countries).

28. *Id.*

29. Thomas Karlsson & Esa Österberg, *Scaling Alcohol Control Policies Across Europe,* 14 DRUGS, EDUC., PREVENTION & POL'Y 499 (2007).

30. Susan A Chapman & Laura A Schmidt, *Capturing Heterogeneity in Medical Marijuana Policies: A Taxonomy of Regulatory Regimes Across the United States,* 51 SUBSTANCE USE & MISUSE 1174 (2017).

31. *See* Smith, *supra* note 3, at 380.

32. *See* ROOM ET AL., *supra* note 2, at 48.

33. *See* BARBARA VIS, POLITICS OF RISK-TAKING: WELFARE STATE REFORM IN ADVANCED DEMOCRACIES (Gosta Esping-Andersen, et al. eds., 2010); Benoît Rihoux, Ilona Rezsöhazy & Damien Bol, *Qualitative Comparative Analysis (QCA) in Public Policy Analysis: an Extensive Review,* 7 GERMAN POL'Y STUDIES 9 (2011); Florin Büchel et al., *Building Empirical Typologies with QCA: Toward a Classification of Media Systems,* 21 INT'L J. PRESS/POLITICS 209 (2016).

34. CHARLES C. RAGIN, REDESIGNING SOCIAL INQUIRY: FUZZY SETS AND BEYOND 7 (2008).

conditions.[35] In this analysis, the cases are existing forms of alternative to criminalization for drug possession.

This work was carried out as part of a review of alternatives to criminalization for the Irish government.[36] In order to create our taxonomy, we carried out research in five phases. The first was to review previous attempts to classify alternative measures, in order to identify common distinctions and areas of confusion, as described above. The second was to carry out detailed study of a set of cases in countries which were chosen on the basis of their ability to provide relevant information on the contexts, mechanisms and outcomes of alternative measures.[37] The countries chosen for this realist review were Australia, Czech Republic, Denmark, Germany, Jamaica, Netherland, Portugal, the United Kingdom and the United States. The methods adopted for the systematic selection of 158 documents[38] on these cases are described elsewhere.[39]

From information gathered in the first and second phases, we extracted potential dimensions for use in differentiating between cases. In this third phase, we iteratively moved between examination of individual cases to potential ways of comparing them, in line with the approach taken in QCA to the identification of the most important conditions for configurational analysis.[40] Our aim here was to identify dimensions which would enable us to create a typology that performs adequately in differentiating between types of alternative (i.e. is exhaustive of all

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35. *Id.*

36. *See* Caitlin Hughes et al., *Review of Approaches Taken in Ireland and in Other Jurisdictions to Simple Possession Drug Offences*, Irish Dep't of Justice & Equality (Sept. 2018), http://www.justice.ie/en/JELR/ANNEXE_I_-_Hughes_Stevens_Hulme_Cassidy_-_2018_-_Review_of_approaches_taken_in_Ireland_and_in_other_jurisdictions_to_simple_possession_dr ug_offences.pdf/Files/ANNEXE_I_-_Hughes_Stevens_Hulme_Cassidy_-_2018_-_Review_of_approaches_taken_in_Ireland_and_in_other_jurisdictions_to_simple_possession_dr ug_offences.pdf .

37. Stevens et al., *supra* note 14, at 6-10.

38. Alex Stevens, *Data Extracted for Realist Review of Alternative Measures for Dealing With Simple Possession of Drugs*, Univ. of Kent, https://data.kent.ac.uk/66/ (last visited May 12, 2021).

39. Caitlin Hughes et al., *Models for the Decriminalisation, Depenalisation and Diversion of Illicit Drug Possession: An International Realist Review*, 2019 Int'l Soc'y for the Study of Drug Pol'y Conf., https://harmreductioneurasia.org/wp-content/uploads/2019/07/Hughes-et-al-ISSDP-2019-Models-for-the-decriminalisation-depenalisation-and-diversion-of-illicit-drug-possession-FINAL.pdf (last visited May 24, 2021); Alex Stevens et al., *Depenalization, diversion and Decriminalization: A Realist Review and Programme Theory of Alternatives to Criminalisation for Simple Drug Possession*, Eur. J. Criminol. (Nov. 28, 2019), https://journals.sagepub.com/doi/full/10.1177/1477370819887514.

40. Ragin, *supra* note 34, at 7.

cases, with groups that are mutually exclusive)[41] and does not contain more types than can be easily communicated, given limited capacity to process information (i.e. does not have more than five to nine types).[42] We chose three dimensions of comparison. We assigned dichotomous scores of one or zero to indicate whether or not each dimension was present or absent for each case. We used the QCA package in the R statistical software environment[43] to produce a truth table which showed how these scores grouped these schemes into "crisp sets" (see Table 1).

The fourth phase was to carry out pragmatic reduction of the identified configurations[44] informed by Boolean minimization[45] in order to group the six identified types of actually existing alternative measures into three broader classes. This produces a two-level taxonomy (see Figure 1). Users of the taxonomy can choose whether to describe alternative measures as falling into three classes or the six identified types.

IV. RESULTS

As stated above, we chose dimensions for inclusion in our taxonomy through an iterative process of combining conceptual and empirical consideration of the distinctions between reforms that had been proposed in previous research and were present in actual cases. Professors Room, Fischer, Hall, Lenton, and Reuter[46] built on previous work[47] to develop a conceptual typology of "reform regimes." They include the distinctions between *de facto* and *de jure* schemes, and also the possible inclusion of diversion, as described above. In application to actual cases, we found these to be useful, creating clear and mutually exclusive distinctions between groups of alternative measures. They are very helpful, for example, in differentiating the various different approaches that have been adopted in

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41. KENNETH BAILEY, TYPOLOGIES AND TAXONOMIES: AN INTRODUCTION TO CLASSIFICATION TECHNIQUES 13 (SAGE Publications, ed., 1994).

42. *See* George A. Miller, *The Magical Number Seven, Plus or Minus One: Some Limits on our Capacity for Processing Information*, 101 PSYCH. REV. 343, 348-49 (1956).

43. Adrian Dusa & Alrik Thiem, *Qualitative Comparative Analysis. R Package Version 1.1-4*, http://cran.r-project.org/package=QCA (last visited Jun 23, 2015) (describing software used to perform Qualitative Comparative Analysis).

44. BAILEY, *supra* note 41, at 16.

45. RAGIN, *supra* note 34, at 7.

46. ROOM ET AL., *supra* note 2, at 48.

47. *See* WAYNE D. HALL & ROSALIE L. PACULA, CANNABIS USE AND DEPENDENCE: PUBLIC HEALTH AND PUBLIC POLICY (2003); Pacula, et al., *supra* note 15, at 7; DAVID MCDONALD ET AL., LEGISLATIVE OPTIONS FOR CANNABIS IN AUSTRALIA (Australian Government Publications Service ed., 1994).

different U.S. states and Australian states and territories.[48] So we chose the *de facto* or *de jure* nature of the alternative as our first dimension of comparison.

While examining actual cases in the light of the previous work referred to above, we also observed the importance of a second distinction; between alternative schemes that do or do not include measures to divert people who are found in possession towards education or health and social services. Such diversion occurs, for example, in Portugal since it decriminalized possession of all drugs in 2001[49], as well as in the Law Enforcement Assisted Diversion (LEAD) programs that have developed in Seattle and other cities where possession of most drugs has not been decriminalized.[50]

The presence or absence of penalties for possession is the third dimension we chose for comparison. Whether or not they change the criminal law, some jurisdictions remove all penalties for small-scale drug possession, and some do not. For example, the 1994 decision of the German federal constitutional court removed the ability of lower courts to impose penalties for small-scale drug possession, without replacing it with a civil penalty (a *de jure* change).[51] The English and Welsh cannabis warning was introduced in 2004 as a *de facto* change which gave police officers the discretion to give people caught in possession a warning that led to no penalty.[52] On the other hand, some other jurisdictions (e.g. many U.S. states) retain civil penalties for small-scale drug possession, even if they removed the criminal offence.[53]

So, we used three principal dimensions in our classification cases of alternatives to criminalization from the nine selected countries. They were:

1. Whether the alternative is *de jure* (rather than *de facto*).

2. Whether the alternative provides diversion to an intervention (e.g., education, treatment, or social services).

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48.   Scheeerer, *supra* note 11, at 586; Pacula, et al., *supra* note 13, at 7.

49.   Caitlin Hughes & Alex Stevens, *What Can We Learn From the Portuguese Decriminalization of Illicit Drugs?*, 50 BRITISH J. CRIMINOLOGY 999 (2010).

50.   Susan E. Collins, Heather S. Lonczak & Seema L. Clifasefi, *Seattle's Law Enforcement Assisted Diversion (LEAD): Program Effects on Recidivism Outcomes*, 64 EVALUATION & PROGRAM PLAN. 49, 52-55 (2017).

51.   L. Bollinger, *Drug Law and Policy in Germany and the European Community: Recent Developments*, 34 J. DRUG ISSUES 491, 499-500 (2004).

52.   Michael Shiner, *Drug Policy Reform and the Reclassification of Cannabis in England and Wales: A Cautionary Tale*, 26 INT'L J. DRUG POL'Y 696, 698 (2015).

53.   *See* R. L. Pacula et al., *What Does it Mean to Decriminalize Marijuana? A Cross-National Empirical Examination*, 16 ADVANCES HEALTH ECON. & HEALTH SERV. RSRCH. 347, 357 (2005).

3. Whether the alternative provides for the imposition of a civil or administrative penalty.

The combination of dimensions two and three enables the comparison to identify a fourth, logically implicated dimension of whether the alternative provides any sanction at all (if the answer to both two and three is no, then there is no sanction provided for).

In our iterative analysis, we also tried using other dimensions, including the types of drug to which the alternative applied, the ages of eligibility, and weight thresholds for simple possession. However, these performed less well in differentiating clearly between cases, partly because they are non-dichotomous. It is difficult to tell where the conceptually justified cut-off point would be between groups. For example, the attempt to distinguish amounts of drugs that are "small" or "larger than small" has caused some confusion in the Czech legal system, which uses this inevitable vague distinction.[54] Adding these dimensions, especially with separation into more than one group each, multiplied the potential number of types beyond our desired maximum.[55] So we used the three dimensions we found most useful in distinguishing between cases.

By extracting information from the nine selected countries, we found twenty-six different cases of alternatives to criminalization for simple drug possession. In discussion between authors, we assigned a score of either one or zero to each of these schemes on each of the three chosen dimensions. The truth table produced by comparing schemes across these dimensions is presented here as Table 1. Of the eight possible combinations of the three dimensions, we found six to be represented by actual cases. We found, for example, no actual cases of the possible combination of a *de jure* regime that combines diversion with no civil penalties.

Table 1 also includes our proposed nomenclature for the types identified through the QCA. We base this on the following definitions, again developed through an iterative process of comparison between previous research and actual cases. We briefly define depenalization as the *de facto* removal of the use of existing criminal sanctions. Diversion refers to schemes which direct people away

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54. Vendula Belackova & Michaela Stefunkova, *Interpreting the Czech Drug Decriminalization: The Glass is Half Full – Response to Cerveny, J., Chomynova, P., Mravcik, V. van Ours, J.C. (2017). Cannabis Decriminalization and the Age of Onset of Cannabis Use*, 52 INT'L J. DRUG POL'Y 102, 102-04 (2018).

55. Due to the arithmetic properties of dichotomous comparison across multiple dimensions, this implied that the eventual typology would have no more than three dimensions, creating a potential maximum of eight types. Adding a fourth dimension would increase that potential maximum to 16 types, and a fifth to 32.

from criminal sanctions and towards educative, therapeutic or social services. Diversion comes in two forms. *De facto* diversion occurs when the practice of diversion is based on decisions by criminal justice agencies (e.g. police, prosecutors) which do not require a change in the law. *De jure* diversion occurs when such practices are given a basis in law. Diversion can occur without drug possession being decriminalized. Decriminalization is the *de jure* removal of criminal sanctions for the possession of drugs for personal use. In one type of decriminalization, criminal sanctions are replaced by civil penalties. In another, it is replaced by both diversion and criminal sanctions. And in a third, it is replaced by neither diversion nor civil sanctions. Examples of each of these types, as found in our realist review, are also displayed in Table 1.

Table 1: Taxonomy of alternate schemes to criminalization for dealing with simple possession of drugs.

	Legal basis	*Diversion to education/ treatment/ social services*	*Adminis-trative/ civil sanction*	*Examples (as at July 2018)*	*Name*
1	*De facto*	No	No	Netherlands *Gedoogbeleid* 'tolerance policy' (cannabis only), U.S. police 'deprioritization', U.K. cannabis and khat warnings, Denmark warnings (1969-2004)	Depenalization
2	*De facto*	Yes	No	Police diversion schemes in seven Australian states, Netherlands diversion (hard drugs only), English police diversion schemes in Durham, West Midlands and Avon, U.S. LEAD program, Baltimore pre-booking scheme	*De facto* diversion
3	*De jure*	Yes	No	South Australian Police Drug Diversion Initiative and Queensland Police Drug Diversion Program (police mandated by law	*De jure* diversion

				to offer diversion to treatment)	
4	*De jure*	Yes	Yes	Portugal and several U.S. states (Maryland, Connecticut & Nebraska)	Decriminali-zation with civil sanctions and diversion
5	*De jure*	No	Yes	Czech Republic, Jamaica, Cannabis Expiation Notice schemes in three Australian states (ACT, SA, NT), 11-16 U.S. states (e.g. Ohio, Mississippi, Massachusetts, Rhode Island)	Decriminali-zation with civil or administrative sanctions
6	*De jure*	No	No	Germany (by virtue of 1994 constitutional court ruling) and Vermont USA	Decriminali-zation with no sanctions

There are alternative nomenclatures and definitions of such alternatives to criminalization. For example, Professors Room, Fischer, Hall, Lenton, and Reuter also use the term depenalization, but in a way we found problematic. They define it as any change which "reduces the severity of the penalties," including fines or prison sentences, and so decriminalization is a sub-type of depenalization.[56] This definition is also adopted by Thomas F. Babor and co-authors.[57] But if penalization is the imposition of penalties, then its opposite – depenalization – implies removal and not just reduction in severity of penalties. Changes are frequently made – upwards and downwards – to established fine amounts and sentence lengths, without these being thought of as either penalization or depenalization.[58] So we prefer to define depenalization as in the previous

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56. ROOM ET AL., *supra* note 2, at 48.

57. THOMAS F BABOR, ET AL., DRUG POLICY AND THE PUBLIC GOOD 166 (2d ed. 2018).

58. Jennifer Fleetwood, Polly Radcliffe & Alex Stevens, *Shorter Sentences for Drug Mules: The Early Impact of the Sentencing Guidelines in England and Wales*, 22 DRUGS EDUC. PREV. POL'Y 428, 434 (2015); Jose Pina-sánchez et al., *Have the England and Wales Guidelines Affected sentencing severity? An Empirical Analysis Using a Scale of Severity and Time-series Analysis*, 59 BR. J. CRIMINOL. 979, 980-82 (2019).

paragraph. This is in line with previous use of the term by international agencies[59] and other researchers.[60]

While a taxonomy of six types is useful in creating mutually exclusive sets of alternatives, it may be considered unwieldy for use in everyday and policy discussion. We therefore reduced these six types into three classes. We did this by pragmatic reduction, which involves collapsing contiguous categories into each other.[61] We informed this process by carrying out Boolean minimization of the truth table which contained all the alternative measures found in the review. This process removes dimensions that are redundant to the description of the actually existing cases.[62]

In Boolean minimization, we found that all the actual schemes in the review could be described as having one of the three following categories containing: *de jure* legal change; or not involving civil sanctions; or involving both *de jure* legal change and civil sanctions. While the diversion dimension is not logically necessary to cover all the actually existing cases in our review, it does make a pragmatic difference in implementing alternative measures, including in how they are experienced by people who are caught in possession of drugs.[63] Those schemes which do not involve *de jure* legal change and do not impose civil sanctions can be divided into those that do or do not involve diversion.

In the resulting two-level taxonomy (illustrated in Figure 1), the type of depenalization forms a class of its own. Schemes that do involve *de jure* legal change are divided into those that do or do not involve the decriminalization of

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59. U.N. OFFICE ON DRUGS & CRIME, *Briefing Paper: Decriminalisation of Drug Use and Possession for Personal Consumption* (Oct. 2015), http://news.bbc.co.uk/2/shared/bsp/hi/pdfs/19_10_11_unodcbriefing.pdf; *Video: What is Decriminalisation of Drugs?*, EUR. MONITORING CENTRE FOR DRUGS & DRUG ADDICTION (June 2015), http://www.emcdda.europa.eu/media-library/motion-graphic-what-decriminalisation-drugs_en.

60. *See, e.g.*, Nils Braakmann & Simon Jones, *Cannabis Depenalisation, Drug Consumption and Crime – Evidence from the 2004 Cannabis Declassification in the UK*, 115 SOC. SCI. & MED. 29, 30-37 (2014); Jerome Adda, Brendon McConnell & Imran Rasul, *Crime and the Depenalization of Cannabis Possession: Evidence from a Policing Experiment*, 122 J. POLIT. ECON. 1130 (2014); Elaine Kelly & Imran Rasul, *Policing Cannabis and Drug Related Hospital Admissions: Evidence from Administrative Records*, 112 J. PUB. ECON. 89 (2014); H.H. Korner, *Depenalization and Decriminalization of Cannabis-consumers Possessing Small Amounts of Cannabis for Personal Consumption*, in CANNABIS SCIENCE: FROM PROHIBITION TO HUMAN RIGHT 289–311 (Lorenz Böllinger ed., 1997), http://apps.webofknowledge.com.chain.kent.ac.uk/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E3cfMlyQZUkA3tZpWgY&page=1&doc=21.

61. BAILEY, *supra* note 41, at 16.

62. RAGIN, *supra* note 34, at 726.

63. JAY LEVY, IS DECRIMINALISATION ENOUGH? DRUG USER COMMUNITY VOICES FROM PORTUGAL 18-21 (2018), https://www.inpud.net/en/decriminalisation-enough-drug-user-community-voices-portugal.

drug possession, so decriminalization also forms a class of types. The remaining types involve diversion. So, diversion is also a class of types. But there is one type that involves both decriminalization and diversion. The type "decriminalization with diversion and civil sanctions" is a hybrid between the diversion and decriminalization classes.

Figure 1 shows that there is an alternative way of dividing this into a two-class taxonomy, depending on whether or not reform is *de jure* or *de facto*, but schemes which include diversion are found on both sides of this divide.

Figure 1: Two-level Taxonomy of Alternatives to Criminalization for Simple Possession of Drugs
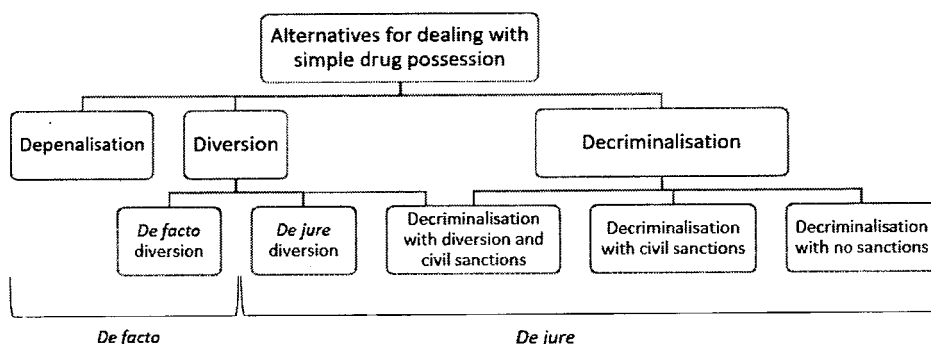
For the sake of precision, we invite users of the taxonomy to apply the six types at its more detailed level. For ease of use in everyday discussion, readers may wish to use the simpler framework of the three classes of depenalization, diversion and decriminalization, as we did in the realist program theory of alternatives to criminalization which we based on our review.[64]

V. APPLICATIONS OF THE TAXONOMY

Alternative measures are constantly changing; new schemes arrive and old ones become obsolete. For example, Vermont has moved on from decriminalization to legalization of cannabis since we carried out empirical research in 2018.[65] We suggest that our taxonomy is robust to the development of new schemes, as each of them can be classified by its three dimensions. For example, Oregon's new (2021) law can be classified as "decriminalization with

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64. Stevens, *supra* note 38.

65. Jason Lemon, *Vermont Recreational Marijuana Legalization, What is Legal and What is Not?*, NEWSWEEK (July 1, 2018), https://www.newsweek.com/vermont-marijuana-legalization-what-legal-what-not-1003482.

diversion and civil penalties."[66] The new bill in Washington State, in contrast, counts as "decriminalization with no sanctions." It removes all sanctions for possession when the amount possessed is "a personal use amount."[67] Meanwhile, the Norwegian legislature is considering adopting an approach which combines "decriminalization with diversion and civil sanctions" for possession of small amounts with "*de jure* diversion" for possession of slightly larger amounts.[68] This approach was recommended by a commission that drew on our research on the Portuguese model.[69] Ireland also considered the Portuguese model, with our assistance,[70] but is currently considering (as of April 2021) an alternative scheme which fits into our type of "*de facto* diversion," with changes to practice, but not to the law that criminalizes drug possession.

So, our proposed taxonomy can be used to classify existing and emerging alternatives to criminalization. It provides an acceptable balance between classificatory clarity and practical usefulness in describing a complex field. This taxonomy may therefore provide a framework for discussion and analysis of alternative measures that is both more comprehensive and more useful than previous classifications. It could, for example, add nuance to the discussion of 'decriminalization' in efforts to classify models of the "governance of addiction"[71] and inform the further development of drug policy indices.[72]

VI. LIMITATIONS

As noted above, the three dimensions we use to create our typology are selected from the many variations between alternative schemes. And as others have observed, there may be great variation between written laws and what happens in practice.[73] Here, we have focused on law and policy "on the books,"

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66. *See Initiative 44 full text*, OR. SEC'Y OF STATE 1, 7 http://oregonvotes.org/irr/2020/044text.pdf (breaking down the entire Drug Addiction and Recovery Act).

67. *See* H.B. 1499, 67th Leg., 2021 Reg. Session (Wash. 2021).

68. *See* Ott Ummelas, *Norway to Decriminalize Personal Drug Use in 'Historic' Shift*, Bloomberg (Feb. 19, 2021), https://www.bloomberg.com/news/articles/2021-02-19/norway-to-decriminalize-personal-drug-use-in-historic-shift.

69. *See* NORWEGIAN OFFICIAL REPORT, RUSREFORM — FRA STRAFF TIL HJELP (2019), https://www.regjeringen.no/contentassets/dfae684e627f4df29c800352bfc4d768/nou-2019-26-rusreform---fra-straff-til-hjelp.pdf.

70. HUGHES ET AL., *supra* note 39.

71. *See, e.g.*, TAMYKO YSA ET AL., GOVERNANCE OF ADDICTIONS (2014).

72. *See* Moxham-Hall & Ritter, *infra* note 76, at 103.

73. ROOM ET AL., *supra* note 2, at 48; Belackova & Stefunkova, *supra* note 54, at 102-04.

but should mention some cases which highlight the need to look at the implementation of alternatives, and not just their legal form.

For example, previous decriminalizations of possession in both Russia and Mexico have been accompanied by such low eligibility thresholds for the weight of drug possessed that many people who are in possession of drugs for personal use have continued to be arrested and convicted. In many countries, we would not associate imprisonment with decriminalization, but this is formally possible in countries, including Estonia, that use detention under administrative as well as criminal law.[74]

The forms taken by drug control regimes do not necessarily correlate with other measurements of "punitivity."[75] For such an analysis, we would need to gather a wider range of policy indicators.[76] Neither should we assume that there is a necessary connection between policy regimes, sanctions and levels of drug use across states or countries.[77] The form of alternative measure may have other effects. For example, diversion to treatment may lead to improvements in health and reductions in offending for people who have problems with drug use.[78]

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74. EASTWOOD, FOX, & ROSMARIN, *supra* note 27.

75. Vendula Belackova et al., *Assessing the Concordance Between Illicit Drug Laws on the Books and Drug Law Enforcement: Comparison of Three States on the Continuum from "Decriminalised" to "Punitive"*, 41 INT'L J. DRUG POL'Y 148, 148-49 (2017); Rosalie L. Pacula, Jamie F. Chriqui & Joanna King, *Marijuana Decriminalization: What Does it Mean in the United States?* 7 (Nat'l Bureau of Econ. Rsch., Working Paper No. 9690, 2003) https://www.nber.org/system/files/working_papers/w9690/w9690.pdf.

76. *See, e.g.*, Vivienne L. Moxham-Hall & Alison Ritter, *Indexes as a Metric for Drug and Alcohol Policy Evaluation and Assessment*, 9 WORLD MED. & HEALTH POL'Y 103 (2017); Alison Ritter, *Methods for Comparing Drug Policies: The Utility of Composite Drug Harm Indexes*, 20 INT'L J. DRUG POL'Y 475, 475 (2009) (using wide range of policy indicators to "compare policy options and outcomes . . .").

77. Mike Vuolo, *National-level Drug Policy and Young People's Illicit Drug Use: A Multilevel Analysis of the European Union*, 131 DRUG ALCOHOL DEPENDENCE 149, 152-54 (2013); Alex Stevens, *Is Policy 'Liberalization' Associated with Higher Odds of Adolescent Cannabis Use? A Re-analysis of Data from 38 Countries*, 66 INT'L J. DRUG POL'Y 94, 97-98 (2019); Richard A. Grucza et al., *Cannabis Decriminalization: A Study of Recent Policy Change in Five U.S. States*, 59 INT'L J. DRUG POL'Y 67, 72-75 (2018); Stevens et al., *supra* note 14, at 6-10; Brendan Hughes, João Matias & Paul Griffiths, *Inconsistencies in the Assumptions Linking Punitive Sanctions and Use of Cannabis and New Psychoactive Substances in Europe*, 113 ADDICTION 2155, 2155-56 (2018); Ayden I. Scheim et al., *Impact Evaluations of Drug Decriminalisation and Legal Regulation on Drug Use, Health and Social Harms: A Systematic Review*, BMJ OPEN, Sept. 21, 2020 at 7-11; Maria Melchior et al., *Does Liberalisation of Cannabis Policy Influence Levels of Use in Adolescents and Young Adults? A Systematic Review and Meta-analysis*, BMJ OPEN, July 10, 2019, at 4, 9-12.

78. Stevens et al., *supra* note 14, at 6-10.

VII. Conclusion

This article is a contribution to the "growing field of legal epistemology."[79] As international bodies, nations and states promote alternatives to criminalization for possession of drugs, it becomes increasingly important to provide a classificatory system that enables clear communication and mapping of their development, implementation and effects. Here we have provided a two-level taxonomy that identifies six types of alternative measure: depenalization; *de facto* diversion; *de jure* diversion; decriminalization with diversion and civil sanctions, decriminalization with civil sanctions; and decriminalization with no sanctions. This taxonomy can be successfully applied to new and emerging cases of alternatives to criminalization.

Such alternatives can also be assigned to three classes (depenalization, diversion and decriminalization). Distinctions between these three classes and from some previous classifications include that depenalization is separate from decriminalization, because decriminalization involves legal change, while depenalization does not. Decriminalization may also accompany civil sanctions and/or diversion, while depenalization – in our definition - does not. Diversion can in some cases be separate from decriminalization because it can be implemented without removing the criminal offence of possession. Non-application of an existing criminal sanction can, for example, be conditional on complying with a diversion process. Decriminalization is distinctive because, as Professors Room, Fischer, Hall, Lenton, and Reuter[80] suggested, it involves a change to the legal status of simple drug possession to remove criminal convictions. Because decriminalization can be combined with diversion, there is a hybrid type between these two classes; i.e. "decriminalization with diversion and civil sanctions."

We propose this taxonomy as a framework for the description and analysis of alternative measures to criminalization for simple possession of drugs in the hope that other researchers and policy makers will find it useful.

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79. Burris, Cloud, & Penn, *supra* note 4, at S6.

80. Room et al., *supra* note 2, at 48.