

Marijuana Legalization 2016: Understanding the policy landscape and design considerations

Beau Kilmer, PhD

Co-Director, **RAND Drug Policy Research Center**
Senior Policy Researcher, **RAND Corporation**
Professor, **Pardee RAND Graduate School**

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Roadmap

- **Unprecedented changes in marijuana policy**
- **Design considerations for legal marijuana:
The 10 P's**
- **What are we learning from jurisdictions that
have legalized?**



"Amazingly thoughtful and informative."
—STEVEN D. LEVITT, author of *Freakonomics*

MARIJUANA LEGALIZATION

WHAT EVERYONE NEEDS TO KNOW[®]

SECOND EDITION

JONATHAN P. CAULKINS,
BEAU KILMER, MARK A. R. KLEIMAN

OCCASIONAL PAPER

Altered State?

Assessing How Marijuana Legalization in California Could Influence Marijuana Consumption and Public Budgets

Beau Kilmer, Jonathan P. Caulkins,
Rosalie Liccardo Pacula, Robert J. MacCoun,
Peter H. Reuter

OCCASIONAL PAPER

Reducing Drug Trafficking Revenues and Violence in Mexico

Would Legalizing Marijuana in California Help?

Beau Kilmer, Jonathan P. Caulkins,
Brittany M. Bond, Peter H. Reuter

Addiction
FOR DEBATE

doi:10.1111/j.1360-0443.2011.03561.x

Design considerations for legalizing cannabis: lessons inspired by analysis of California's Proposition 19

Jonathan P. Caulkins¹, Beau Kilmer², Robert J. MacCoun³, Rosalie Liccardo Pacula² & Peter Reuter⁴

¹Carnegie Mellon University, Heinz College and Qatar Campus, Pittsburgh, PA, USA; ²RAND Drug Policy Research Center, Santa Monica, CA, USA; ³Goldman School of Public Policy, University of California, Berkeley, CA, USA; ⁴University of California, Berkeley, CA, USA

Office of National Drug Control Policy

What America's Users Spend on Illegal Drugs

American Journal of

PUBLIC HEALTH

RAND INTERNATIONAL PROGRAMS and DRUG POLICY RESEARCH CENTER



Insights based on interactions with government agencies

- **Washington State Liquor Control Board**
- **Dutch Ministry of Security and Justice**
- **Uruguay's Junta Nacional de Drogas**
- **State of Vermont**

Definitions matter



Prohibition

Decriminalization

Medical

Legalization



Definitions matter



Prohibition

Decriminalization

Medical

Legalization



Reduce penalty
for small transactions

Possession of
small amounts a
civil rather than
criminal offense

Definitions matter



Prohibition



Decriminalization

Reduce penalty
for small transactions

Possession of
small amounts a
civil rather than
criminal offense

Medical

Legalization

Legal to
possess,
distribute,
and
produce

Definitions matter



Prohibition

Decriminalization

Reduce penalty
for small transactions

Possession of
small amounts a
civil rather than
criminal offense

Medical

Remove criminal
sanctions for
medical use

Access through
home cultivation
and/or dispensaries



Legalization

Legal to
possess,
distribute,
and
produce

Why is marijuana legalization controversial?

Why is marijuana legalization controversial?



- Generate revenue
- Free up criminal justice resources
- Prevent users from getting a criminal record
- Make it easier to use for medical purposes

Why is marijuana legalization controversial?

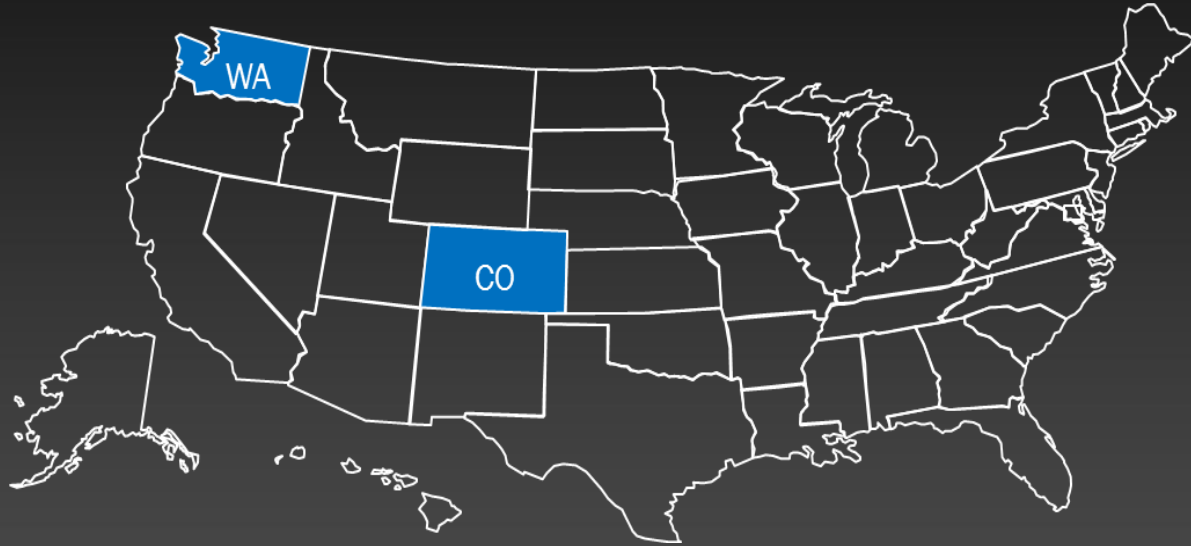


- Generate revenue
- Free up criminal justice resources
- Prevent users from getting a criminal record
- Make it easier to use for medical purposes



- Increase youth use and clinical disorders
- More “drugged driving”
- Increase emergency room visits
- Increase psychotic symptoms
- Correlated with other outcomes

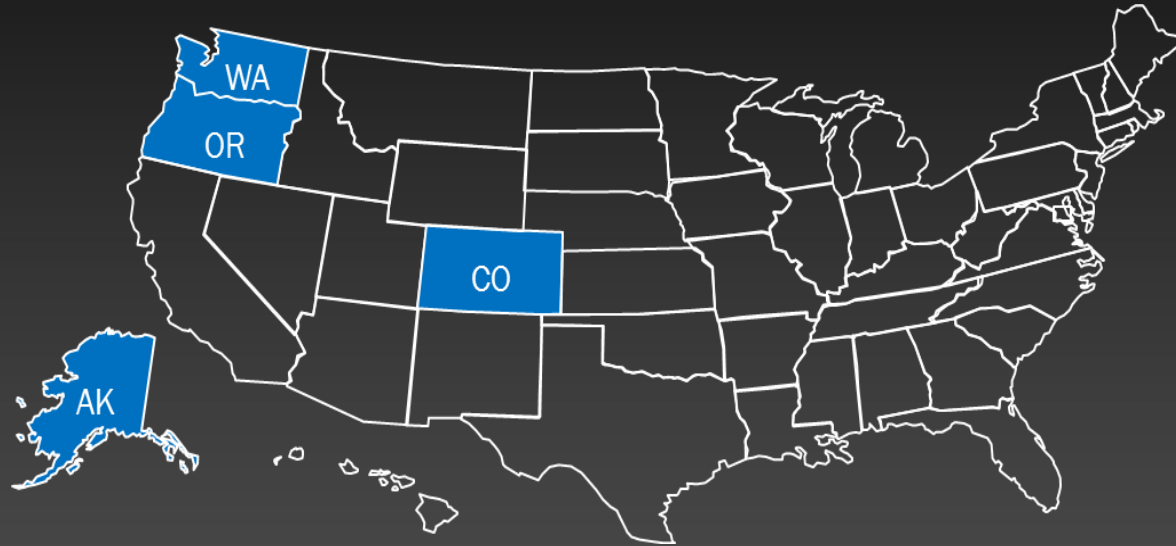
What is happening in the U.S. is unprecedented



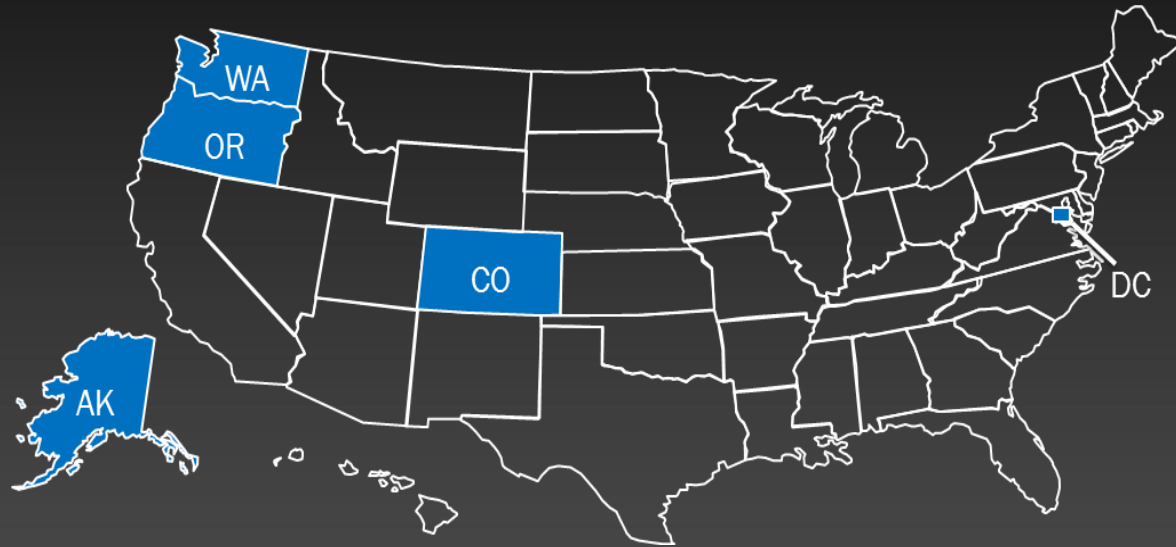
Not even the Netherlands goes this far



Voters in Alaska and Oregon also passed initiatives to create for-profit marijuana industry



Voters in Washington DC passed an initiative to legalize home growing and “gifting”



Other states are considering legalization

- **State legislators in U.S. have introduced bills**
- **Will be on the ballot in California and other states in 2016**

But this is still illegal under U.S. federal law

- U.S. Department of Justice has decided not to block implementation
- Federal policy can change
- Sent a signal to other states and other countries

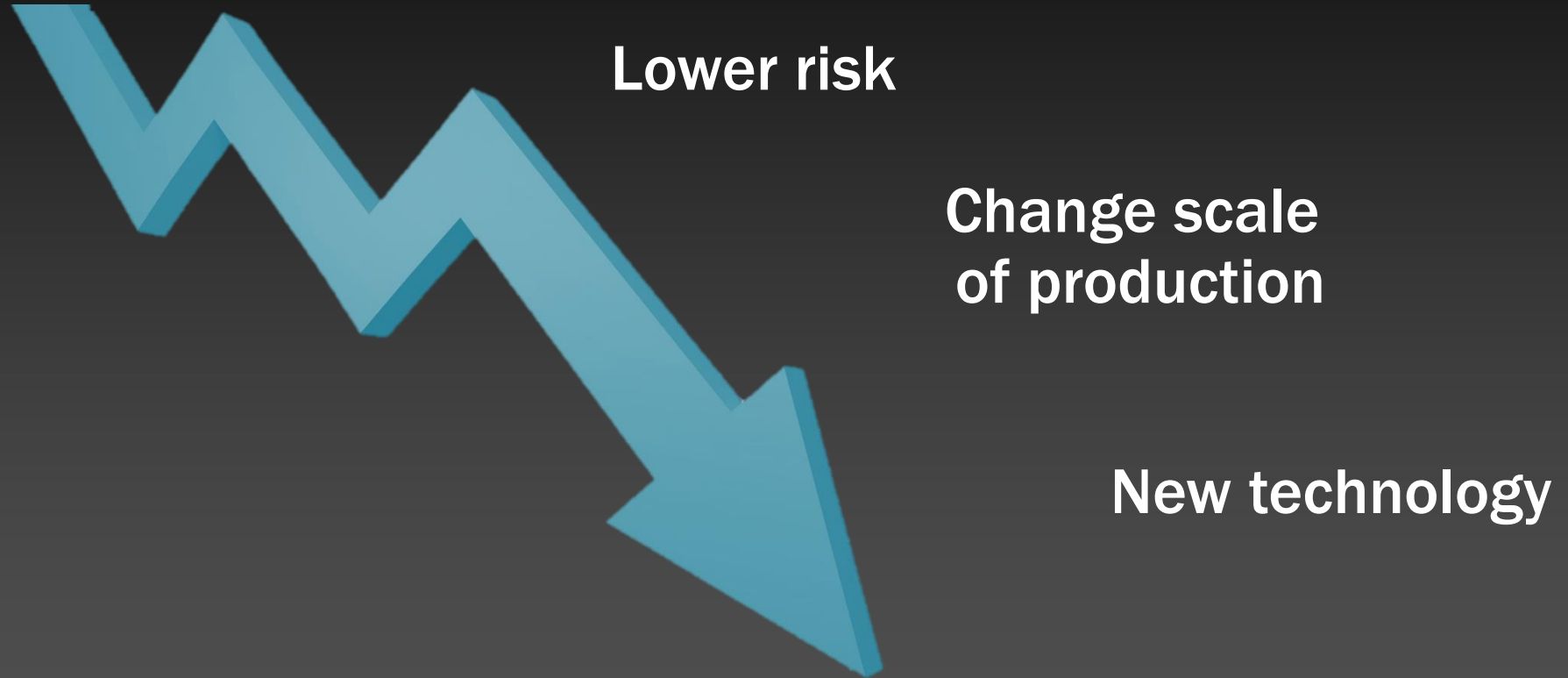
Roadmap

- Unprecedented changes in marijuana policy
- Design considerations for legal marijuana:
The 10 P's
- What are we learning from jurisdictions that have legalized?

Design Considerations: The 10 P's

1. Production

Legalization will drive down production and distribution costs



One pound of processed, high-potency marijuana

California black market “farm gate” ~\$1,500

Caulkins et al., 2012; Daly, 2014

One pound of processed, high-potency marijuana

California black market “farm gate” ~\$1,500

Legalize indoor home-production only < \$400

Caulkins, 2010; Kilmer et al., 2010

One pound of processed, high-potency marijuana

California black market “farm gate” ~\$1,500

Legalize indoor home-production only < \$400

Legalize outdoor grows (THC equivalent) < \$40

Caulkins et al., 2012; 2016

Design Considerations: The 10 P's

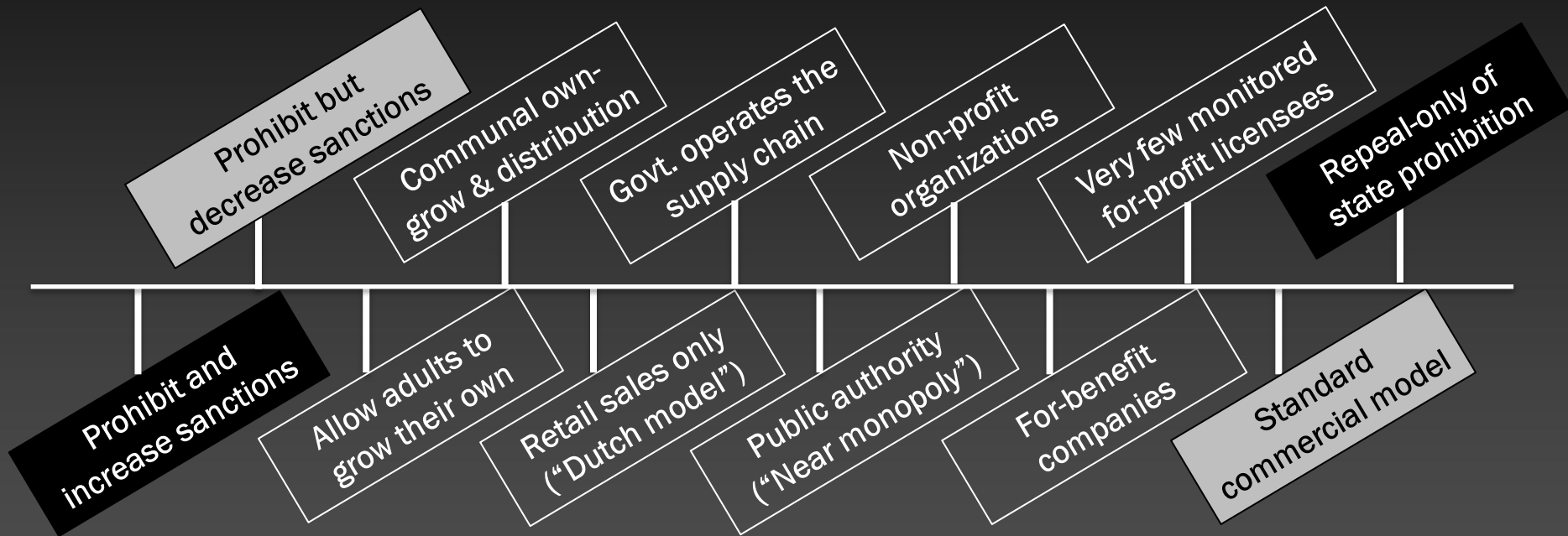
1. Production

2. Profit Motive

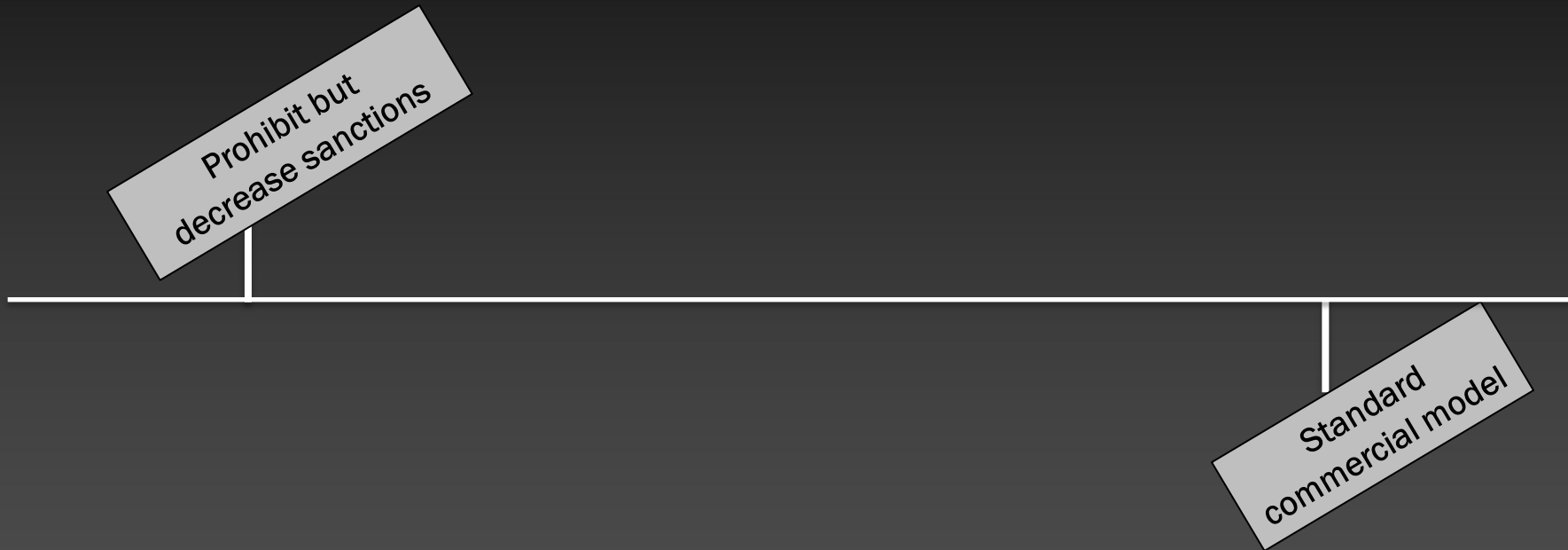
Is the commercial alcohol model desirable?

- **Heavy users drive market for alcohol**
 - 80/20 rule (Cook, 2008)
 - Same for marijuana (Kilmer et al., 2014)
- **Creates strong profit motive for private companies to maintain and nurture heavy users**
- **Powerful lobby that fights regulations and taxes**

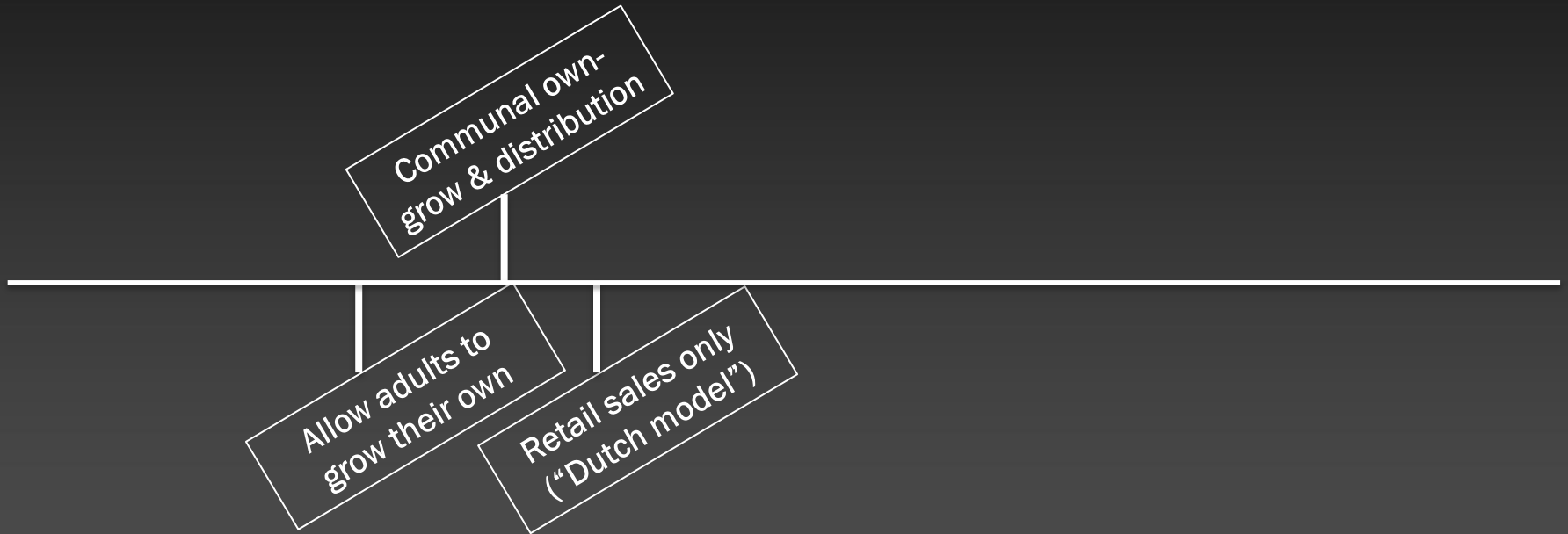
Many alternatives to status quo prohibition



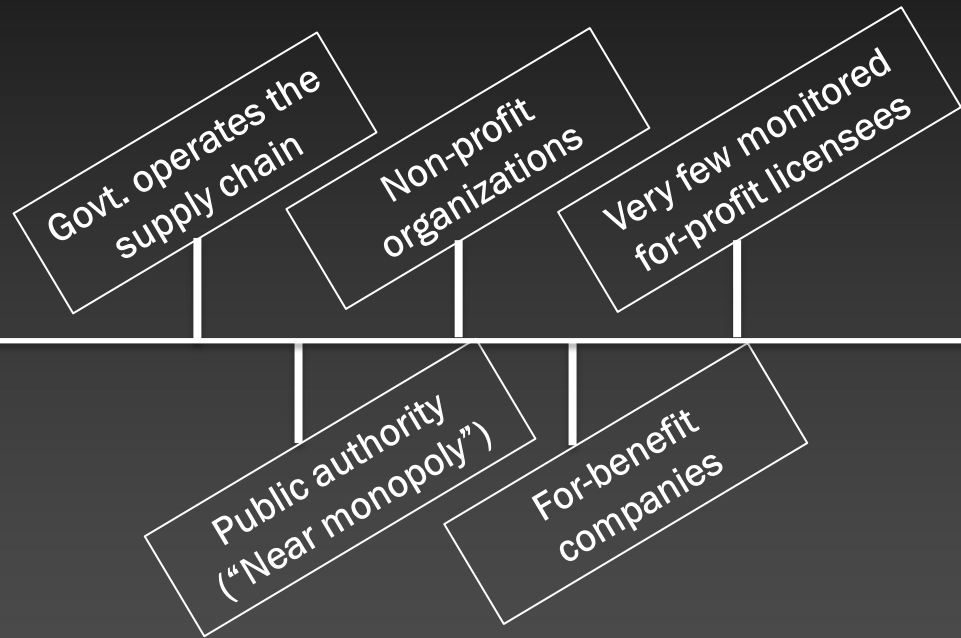
Commonly-discussed options in the US



Middle-ground options (small scale)



Middle-ground options (large scale)



Design Considerations: The 10 P's

1. Production
2. Profit Motive
3. Promotion

Promotion poses enormous challenges

- **Competition & profit -> incentives to promote**
- **Think about promotion in communities and in stores**
- **Countering promotion can be difficult in the U.S.**
 - Colorado and Washington are working to limit advertising
 - Hard to eliminate in the U.S. with the “Commercial free speech” doctrine

Design Considerations: The 10 P's

1. Production
2. Profit Motive
3. Promotion
4. Prevention

Many questions related to prevention

- Will resources be devoted to prevention and countering promotion?
- How will youth messaging change now that consumption is legal for adults?
- Will the messaging and strategy should be in place before legal marijuana ever hits the streets?

Prevention also includes limiting access or exposure to marijuana

- **Learn from experiences with alcohol & tobacco**
 - Pacula et al., 2014

- **These decisions can make a big difference**
 - Number of retail off-premise stores
 - Days of operation
 - Hours of operation

Design considerations: The 10 P's

1. Production
2. Profit Motive
3. Promotion
4. Prevention
5. Policing & Enforcement

Marijuana-related police contacts will still occur

- In U.S., those under 21 years = 20-25% of market
 - In the U.S. (Burns et al., 2013)
- Will police spend more or less time dealing with smoking in public?
- Will extra resources be devoted to eliminating black market transactions?

Design considerations: The 10 P's

1. Production

2. Profit Motive

3. Promotion

4. Prevention

5. Policing & Enforcement

6. Penalties

What will the penalty be for breaking new law?

- **What will penalties be for minors in possession and those who supply them?**
 - A criminal offense? Similar to alcohol?
- **Will penalties for impaired driving change?**
- **Will production violations be criminal or just fines?**

Design considerations: The 10 P's

1. Production

2. Profit Motive

3. Promotion

4. Prevention & Treatment

5. Policing & Enforcement

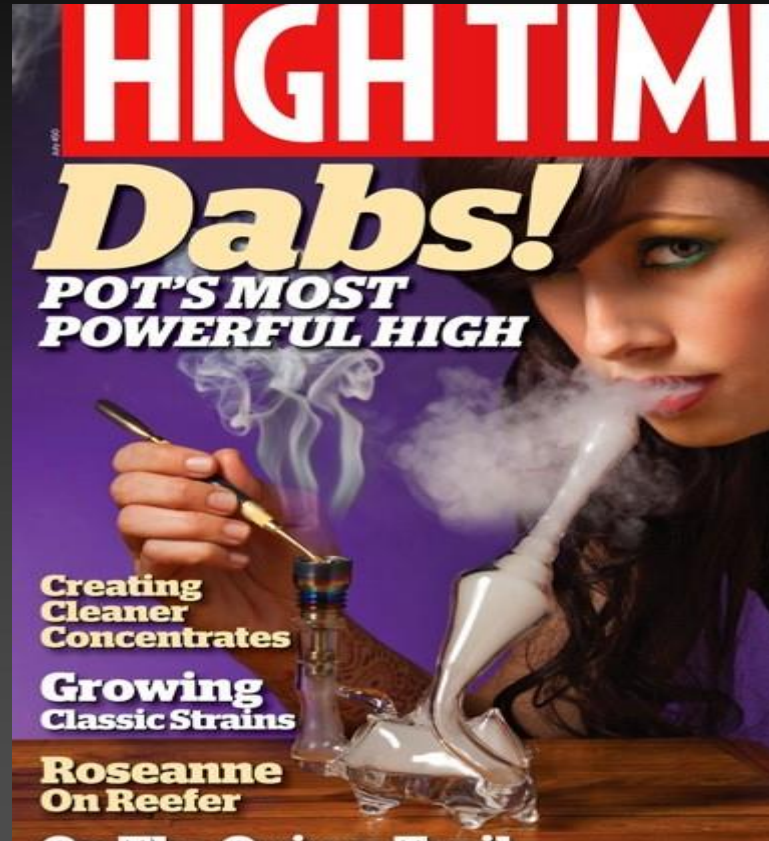
6. Penalties

7. Potency

Should THC levels be regulated?

- **THC is the main intoxicant, also responsible for increasing anxiety and panic attacks**
 - E.g., Hall & Pacula, 2003; Room et al., 2010
- **Mexican marijuana is 4-8% THC, sinsemilla sold in dispensaries ranges from 10-25% THC**
 - Kilmer et al., 2010; Kilmer et al., 2014
- **Dutch are discussing limiting THC at 15%**

Hash oil wax/shatter being used to “Dab”



Hash oil wax/shatter being used to “Dab”

My goal is not to create a panic about “dabs”; may just be a small-scale regional fad that will fade away.

Since we really don’t know anything about prevalence or consequences, researchers and policymakers need to look into this.



CBD is now getting more attention

- **CBD is a cannabinoid that is believed to offset some of the effects of THC**
- **Breeding for maximum THC decreased CBD levels**
 - Eg., Burgdorf et al. 2011
- **Emerging discussion about THC:CBD ratios**

Design considerations: The 10 P's

1. Production

2. Profit Motive

3. Promotion

4. Prevention & Treatment

5. Policing & Enforcement

6. Penalties

7. Potency

8. Purity

Need to give serious thought to:

- **Molds and contaminants**
- **Additives and flavored products**
- **Will it be legal to infuse marijuana products with nicotine or alcohol?**

Hash-oil solutions now used in e-cigarette devices

Google Translate x OpenVape x

openvape.com

HOME LOCATIONS FAQ CONTACT US FACEBOOK TWITTER INVEST **g.open**



open VAPE VAPORIZER PENS

the inside counts.


lifetime warranty.

simple & discreet.
No buttons or dials. No odor. Enjoy your privacy

atomizer.

the perfect puff.

stylus.



open vape

it's what's inside that counts.

TEXT VAPE TO 20300



Design considerations: The 10 P's

1. Production

2. Profit Motive

3. Promotion

4. Prevention & Treatment

5. Policing & Enforcement

6. Penalties

7. Potency

8. Purity

9. Price

Price matters

- Influences consumption and revenues
- **10% decline in price leads to ~3% increase in marijuana prevalence**
 - Pacula & Lundberg, 2014; Gallet, 2014
 - We do not have good data on total price elasticity
 - Would be better if we had price per unit of THC

Options to elevate price

Require product testing

Reduce competition

Impose taxes



Need to think hard about marijuana taxes

- If taxes are too high, there will be evasion
- Will taxes be applied to the medical market?
- There are alternatives to taxing by value
 - E.g., By weight, % THC, THC:CBD ratio

Design considerations: The 10 P's

1. Production

2. Profit Motive

3. Promotion

4. Prevention & Treatment

5. Policing & Enforcement

6. Penalties

7. Potency

8. Purity

9. Price

10. Permanency

How easy will it be to change policies?

- Early adopters will probably suffer growing pains and want to make changes
- Raises questions about how much flexibility to build into the taxation and regulatory regime

Could also consider incremental approach

- Lot of focus on evidence-based policy, but we don't have evidence base for marijuana supply
- Why start with one of the most extreme options?
- Could imagine starting with small-scale or non-profit approach before alcohol model

Another idea: Sunset clause

- As sunset date approaches, legislature or voters could vote to sustain the law or try something else
- Would give jurisdictions an escape clause, a chance—by simply sitting still—to overcome the lobbying muscle of the new industry

Roadmap

- Unprecedented changes in marijuana policy
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What are we learning?

- **It's very early!**
- **Arrests are decreasing in CO and WA**
- **Tax revenue coming in, not as much as projected**
- **Edibles are posing regulatory challenges**

What is happening with marijuana prevalence?

- **Self-reported past-month use is increasing**
 - Up 43% in CO from 2011/2 to 2013/4
 - Up 25% in WA from 2011/2 to 2013/4
 - However, 3 other states saw larger increases than CO
- **Colorado leads country in youth prevalence**
- **But...**

...Be very careful about drawing strong inferences

- Only focused on prevalence, not consumption
- Need to put self-report data in perspective
- Need to consider control “groups”, rival hypotheses
- Also need to pay close attention to what’s happening with use of alcohol, tobacco, and prescription opioids

Concluding thoughts

- You will continue to hear a lot about marijuana

Concluding thoughts

- **You will continue to hear a lot about marijuana**
- **Reasonable people can disagree about marijuana**

Concluding thoughts

- You will continue to hear a lot about marijuana
- Reasonable people can disagree about marijuana
- These “10 P’s” are a good place to start for those who want to engage in debate, design, and analysis



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