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11 Attorneys for Plaintiffs

12
13 **UNITED STATES DISTRICT COURT**
14 **EASTERN DISTRICT OF CALIFORNIA**

15
16 TRACY RIFLE AND PISTOL LLC;
MICHAEL BARYLA; TEN PERCENT
17 FIREARMS; WESLEY MORRIS;
SACRAMENTO BLACK RIFLE, INC.;
18 ROBERT ADAMS; PRK ARMS, INC.;
JEFFREY MULLEN; IMBERT & SMITHERS,
19 INC.; and ALEX ROLSKY,

20 Plaintiffs,

21 v.

22 KAMALA D. HARRIS, in her official capacity
as Attorney General of California; and
23 STEPHEN J. LINDLEY, in his official capacity
as Chief of the California Department of Justice
24 Bureau of Firearms,

25 Defendants.

Case No.: 2:14-cv-02626-TLN-KJN

**EXPERT WITNESS REPORT OF
PROFESSOR GARY KLECK**

1 **INTRODUCTION**

2 I am the David Bordua Professor of Criminology and Criminal Justice at Florida State
3 University. Counsel for the plaintiffs in *Tracy Rifle & Pistol LLC v. Harris* (E.D. Cal. Case No.
4 2:14-cv-02626-TLN-KJN (TEMP)) have asked me to offer an opinion on the case and this report
5 sets forth my opinions and the scholarly foundation for those opinions.

6 **QUALIFICATIONS**

7 I received my Ph.D. in Sociology from the University of Illinois in 1979. I have taught
8 research methods to doctoral students for 38 years, covering statistical data analysis techniques,
9 survey research methods, and strategies for distinguishing better research from poorer quality
10 research. I have published four books, over 50 articles in refereed journals, and 37 other articles
11 and chapters, most of them on the topic of firearms and violence. One of those books, *Point*
12 *Blank: Guns and Violence in America*, won the 1993 Michael J. Hindelang Award of the American
13 Society of Criminology, awarded to the book of the previous several years which “made the most
14 outstanding contribution to criminology.”

15 I also wrote *Targeting Guns* (1997) and, with Don B. Kates, Jr., *The Great American Gun*
16 *Debate* (1997) and *Armed* (2001). My articles have been published in the *American Sociological*
17 *Review*, *American Journal of Sociology*, *Social Forces*, *Social Problems*, *Criminology*, *Journal of*
18 *Criminal Law and Criminology*, *Law & Society Review*, *Journal of Research in Crime and*
19 *Delinquency*, *Journal of Quantitative Criminology*, *Crime and Delinquency*, *UCLA Law Review*,
20 *the Journal of the American Medical Association*, and many other journals.

21 I have testified before Congress and state legislatures on gun control issues, and my work
22 has been cited by the U.S. Supreme Court. I have worked as a consultant to the National Research
23 Council, National Academy of Sciences Panel on the Understanding and Prevention of Violence,
24 and to the National Research Council Committee on Improving Research Information and Data on
25 Firearms. I also served as a member of the U.S. Sentencing Commission's Drugs-Violence Task
26 Force, and as a member of the National Research Council Committee on Priorities for a Public
27 Health Research Agenda to Reduce the Threat of Firearm-related Violence. I am a referee for over
28 a dozen professional journals, and serve as a grants consultant to the National Science Foundation.

1 A copy of my vita may be found in Exhibit 1.

2 **COMPENSATION**

3 I am being compensated for my services at an hourly rate of \$400.

4 **MATERIALS CONSIDERED**

5 My opinions are based on the sources cited in this report, and those cited in Exhibits 2-4. I
6 also read the Expert Witness reports of Professor Gregory T. Gundlach and Professor J. John
7 Mann.

8 **PAST WORK AS AN EXPERT WITNESS**

9 In the past four years I have been deposed as an expert witness in two legal cases:

- 10 • *Heller et al. v. District of Columbia*. Deposed 7-2-13.
11 • *Wilson v. Cook County*. Deposed 9-16-13.

12 **ASSIGNMENT**

13 I have been asked by Plaintiffs' counsel to provide evidence intended to contradict or rebut
14 evidence on the same subject matter identified in the State's expert witness disclosures.

15 **SUMMARY OF OPINIONS**

16 1. Criminals usually do not get their crime guns from gun stores, and when they do,
17 they do not get them impulsively.

18 2. Neither criminals, suicide-prone persons, nor members of the general public can
19 quickly obtain handguns from gun stores in California, because the state requires a ten-day wait
20 before a purchaser can take possession of a gun. Therefore, if restrictions on gun store signage are
21 intended to prevent impulsive acquisitions of handguns from gun stores, they are an unnecessary
22 solution to a nonexistent problem.

23 3. People who commit suicide with guns – even those who commit suicide
24 impulsively - rarely get guns impulsively, shortly before committing suicide, and, as far as anyone
25 can establish, on the rare occasions that they do so they apparently get them specifically for the
26 purpose of committing a suicide that they had already determined they were going to commit.

27 4. People who commit suicide with firearms are different from those who commit
28 suicide using other methods – more strongly determined to kill themselves, less impulsive, with

1 more persistent motivations to commit suicide. Thus, facts describing suicides and suicide
2 attempters in general cannot be applied specifically to those who use firearms.

3 5. The best available evidence indicates that suicide attempts with firearms are no
4 more lethal than suicide attempts by hanging, the suicide method most likely to be substituted if
5 firearms are not available. Opinions to the contrary are based on “cherry-picking” of extreme and
6 unrepresentative studies. Thus, no suicide deaths would be prevented if those who otherwise
7 would have used firearms to kill themselves used hanging instead.

8 6. The best available evidence indicates that firearms ownership rates affect the rate of
9 *firearms* suicides, but not the total rate of suicide. That is, gun prevalence affects whether people
10 use guns in their suicides, but does not affect how many people kill themselves.

11 7. I have reviewed the entire body of scholarly research on the links between firearms
12 and violence, including suicide, and am not aware of any evidence that signage in or outside of
13 gun stores increases impulsive purchases of handguns by persons who use them to commit suicide
14 or violent crimes, or that restriction on such signage reduces the number of suicides or violent
15 crime.

16 ANALYSIS

17 I will address each of the State’s expert witnesses’ claims in the order they appear in their
18 Reports, beginning with Professor Gundlach and proceeding to Professor Mann’s report.

19 *Expert Witness Report of Professor Gregory T. Gundlach (G)*

20 Regarding Professor Gundlach’s qualifications, while he may be an expert in marketing in
21 general, he presents no evidence of expertise regarding the marketing of firearms. He cites his co-
22 authorship of just two published articles pertaining to the marketing of firearms (Exhibit 2, items
23 18 and 36), neither of which is based on empirical evidence concerning the marketing of firearms,
24 and neither of which addresses the impact of signage on handgun purchases in general, or
25 impulsive handgun purchases for violent purposes in particular.

26 Indeed, none of the evidence cited anywhere in G’s report pertains specifically to the
27 marketing of *handguns*. He nowhere asserts that marketing practices and effects are identical for
28 all products, so there is no foundation for him to extrapolate from his very generic observations

1 about marketing in general to the marketing of handguns in particular. Further, none of the
2 evidence G cites pertains to the purchase, impulsive or otherwise, of handguns or any other
3 product, *by persons who use the product to commit criminal acts or harm themselves*. In sum,
4 there is a disconnect between his areas of expertise and the opinions he proffers on p. 4. There is
5 at best only the most remote inferential link between the scholarly sources G cites and the
6 conclusions he draws regarding signage and impulsive purchases of handguns.

7 G's discussion of impulse buying on pp. 13-15 does not address purchases of handguns at
8 all, and when he finally addresses handguns in a single short paragraph (pp. 15-16), none of his
9 purportedly supporting sources in fn. 70-76 provide empirical evidence documenting large
10 numbers of impulse purchases of handguns, or indeed *any* such purchases. The source in fn. 70
11 merely *alludes to* impulsive firearm purchases, but makes no claims of its frequency and presents
12 no relevant empirical evidence. The source in fn. 71 consists of a single off-the-cuff oral remark
13 made by a single firearms manufacturing firm executive, offering a personal opinion not backed up
14 by any pertinent evidence. Further, there is no evidence that this speaker defined an impulsive
15 purchase the same as G did. The source cited in fn. 72 flatly contradicts G's position, concluding
16 that "Women's first gun purchase is *not* typically an impulse buy." This was the only reference to
17 impulsive gun purchases in the entire cited report. Neither of the sources cited in fn. 73 or 74 even
18 refer to impulsive gun purchases, never mind contain evidence on the question. The source cited
19 in fn. 75 made a single reference to impulse purchases of guns (though not of handguns in
20 particular), but presented no evidence of their frequency. Finally, fn. 76 consists entirely of quotes
21 from two nonrandomly selected self-identified gun buyers who claim to have made impulse buys.
22 Neither defined what he meant by the term "impulse buy" and, judged in context, the term may
23 only mean there was a short time between the person initially becoming aware of a particular
24 model of guns and making the *decision* to buy it – *not* the time between first exposure to the gun
25 and actually taking possession of it. For purposes of preventing impulsive acts of gun violence,
26 only the latter time interval is relevant, since one can only do violence with a gun after taking
27 possession of it.

28 G's effort to support the proposition that many handguns are purchased impulsively falls

1 afoul one crucial fact that G seems to neglect. The current case pertains only to purchases of
2 handguns from gun stores in California, but California requires that all handgun buyers wait 10
3 days before taking possession of a handgun. While there might be a short time interval between a
4 person's exposure to advertising and their *purchase* of a handgun from a gun store, there is always
5 a 10-day span between purchase and taking possession of any handgun bought in a gun store. I am
6 not aware of any evidence of California gun dealers violating the 10-day wait requirement, nor do
7 the Defendant's experts cite any such evidence. As far as can be determined, impulsive
8 acquisitions of handguns from gun stores just does not happen in California. If the purpose of the
9 State's ban on visible handgun signage is intended to reduce such acquisitions, it is an unnecessary
10 solution to a nonexistent problem.

11 More generally, criminals do not acquire crime handguns by impulsively purchasing them
12 from gun dealers. First, only 16% of handgun acquisitions by criminals are made via a purchase
13 from a gun store or other retail outlet, whether impulsive or not (Wright and Rossi 1986, p. 185).
14 Second, even among those few who do get their guns from gun dealers, many were buying a
15 handgun in addition to others they already owned, which means that failing to make the most
16 recent potential purchase would not deny them a handgun to use in crime.

17 Third, they do not buy them impulsively, in the sense that they are purchased a short time
18 before committing a violent act with the handgun. A survey of Florida prison inmates who had
19 committed murder with a handgun found that, of those who had purchased their handgun from a
20 retail source, only 2.3% had owned only one handgun at the time and purchased the murder
21 handgun within three days of the killing (Mannelli 1982). These figures imply that less than
22 4/10ths of one percent ($0.023 \times 0.16 = 0.0037$) of handgun acquisitions by criminals could be
23 meaningfully described as impulsive purchases from gun stores, or any other retail outlet for that
24 matter. Consequently, all of G's evidence concerning impulse buying of goods in general has no
25 relevance to criminal purchases of handguns.

26 Impulsive purchases of handguns for purposes of committing suicide are similarly rare, but
27 I will reserve discussion of the relevant evidence until addressing Professor Mann's report, since it
28 is focused almost entirely on suicide.

1 G's section on the "antecedents and triggers to impulse buying" (pp. 26-33) relies almost
2 entirely on a meta-analysis of 63 studies by Amos, Holms and Kenson (2014). None of these 63
3 studies pertained specifically to purchases of handguns. Likewise, none pertained to purchases of
4 *any* products for the purpose of committing a crime or act of self-harm. The closest this meta-
5 analysis article came to even indirectly addressing handguns was in a discussion of "product type."
6 The authors documented that the likelihood of an impulse purchase was *not* the same for all
7 product types. Thus, findings pertaining to one product type cannot be generalized to other
8 product types, as G. implicitly assumes. The broad product category used by Amos et al. into
9 which handguns would fall would be "general merchandise," and the only finding of this meta-
10 analysis that bore on which broad types of products were more likely to be purchased impulsively
11 was that fashion merchandise was most likely to be purchased impulsively, and general
12 merchandise was *least* likely to be purchased impulsively (p. 93, Table 7). G. did not include this
13 information in his report.

14 Conversely, there was only a single, casual, reference to signage in the entire meta-
15 analysis, and no empirical findings regarding the effect of signage on impulsive buying. More
16 generally, none of empirical research reviewed by G bears on the effect of signage on impulsive
17 buying of handguns by consumers in general or by persons intending to do violence in particular.

18 ***Expert Witness Report of Professor J. John Mann***

19 Professor Mann's report is slightly more relevant to the case at hand, since he is expert in
20 some aspects of suicide, primarily the biological causes of suicidal behavior. He seems not to have
21 expertise, however, on the use of firearms in suicides, the acquisition of the guns used in firearm
22 suicides, whether those acquisitions are impulsive, or the effect of firearm availability on suicidal
23 behavior. His expertise appears to have only quite limited relevance to the issues in this case, or
24 the gun-related opinions he proffers. Of the hundreds of published articles listed in his Curriculum
25 Vitae (Mann Expert Report Exhibit A, pp. 12-61), none pertain to either the involvement of
26 firearms in suicide or in any other type of violence.

27 Regarding the five topics M identifies in his description of his Assignment, his expertise, as
28 conveyed by his resume and his expert report, applies only to Topic One, the connection between

1 impulsive personality traits and suicide. Correspondingly, I do not dispute his opinion that
2 “impulsive personality traits increase the risk of suicide” (p. 3). The rest of my discussion will be
3 devoted to rebutting the rest of M’s opinions, summarized in sections 12 through 15 on p. 3. I
4 divide my rebuttal into the same section heading, I to V, used by M, skipping Section I.

5 **Section II**

6 M claims (p. 6) that “having a handgun in the home is a risk factor for firearm suicide.” He
7 is not qualified to render an opinion on this topic, having never done any research on the topic.
8 The three specific studies he cites in support (Exhibits 17-19) are a tiny cherry-picked subset of
9 studies on the guns/suicide link, and, contrary to M’s claims, do not even address the effects of
10 “having a handgun in the home.” Rather, those studies addressed the statistical association
11 between *purchase* of a handgun and suicide. The distinction is not a mere quibble. People
12 frequently acquire, then get rid of firearms – gun ownership is highly fluid (Cook and Ludwig
13 1998). Thus, acquiring a handgun at one time does not guarantee that the purchaser possesses a
14 handgun up to a year later. Further, none of these three studies established that any of the recently
15 purchased handguns were used in a suicide. Indeed, none of the studies established that *any*
16 handgun was used in the suicides, since their research did not distinguish firearms suicides
17 committed with handguns from firearms suicides committed with shotguns or rifles. This is a
18 serious problem, since about half of firearms suicides are committed with rifles or shotguns (Kleck
19 1997). M seems to misapprehend just what was measured in these studies, erroneously stating (p.
20 8, line 14) that they measured “having a handgun in the home.”

21 M also claims that these three studies somehow establish a link between handgun
22 possession (or purchase) and *impulsive* suicide, but nothing in these studies established that any of
23 the firearm suicides examined were impulsive. Cummings et al. (1997, p. 976) even conceded that
24 the average time interval between handgun purchase and firearms suicide was *10.7 years*, and
25 never less than 11 days – hardly supportive of gun suicides being quickly triggered by a handgun
26 purchase.

27 Wintemute and his colleague (1999) claimed to have documented suicides occurring after a
28 “recent” handgun purchase, but defined “recent” as being within *a year* of the handgun purchase.

1 They did report that the risk of firearm suicide is *relatively* higher in the weeks immediately
2 following a handgun purchase, but their method of presenting their findings prevented readers
3 from determining whether any significant number of gun suicides actually occurred in this period,
4 as opposed to merely being less rare than those occurring months or years after the handgun
5 purchase. When these authors finally got around to saying something directly about the frequency
6 of suicides occurring “shortly” after purchasing a handgun, it was to acknowledge that it is rare:
7 “handgun purchasers accounted for only 10.3 percent of those who committed suicide by firearm
8 statewide in the year after their handgun purchases” (p. 1587). A suicide that follows a handgun
9 purchase by as much as a year can hardly be described as impulsively driven by the handgun
10 purchase. And suicides that did follow a handgun purchase by only *a few days* must be a tiny
11 fraction of the 10.3 percent cited by Wintemute et al. as occurring *within 365 days* of the handgun
12 purchase. In short, the main fact to be derived from this study is that suicides following
13 immediately after a handgun purchase are extremely rare, a fact that plainly does not support
14 Professor Mann’s argument.

15 Finally, the study by Grassel et al. (Exhibit 18) parallels the Wintemute study in noting the
16 occurrence of suicides among handgun users and in using the same definition of a “recent”
17 handgun purchase – one occurring as much as a year before the suicide. Again, it had nothing to
18 say about handgun purchases triggering impulsive suicides.

19 The more important question is whether these studies do anything more than establish a
20 meaningless statistical *association* between handgun purchase and suicide. That is, do they
21 establish that handgun purchases *cause* an increase in the risk of suicide? If there is no causal
22 effect of handgun purchases on suicide, then reducing impulsive handgun purchases would not
23 cause a reduction in suicide.

24 Establishing causation in nonexperimental or observational research like this requires that
25 the research control for “confounding variables.” In this field of research, a confounding variable
26 is a variable that (a) affects suicide *and* (b) is also correlated with handgun purchase or ownership.
27 None of the three studies cited by Mann controlled for a single confounding variable.

28 In Exhibit 2, I (a) review the full body of case-control studies on the guns/suicide link, not

1 just a cherry-picked selection of three such studies, (b) identify 19 known or likely confounding
2 variables, and (c) document that none of the studies controlled for even half of the confounding
3 variables they needed to control in order to isolate the effect of gun ownership on suicide (and that
4 most did not control for *any* confounders). Wintemute and his colleagues even explicitly concede
5 this point (1999, p. 1588: “We cannot determine ...”), acknowledging that they did not control for
6 even *one* confounding variable.

7 Further, the failure to control for these confounding variables biases the association
8 between guns and suicide upward, mistakenly attributing to gun ownership the suicide-elevating
9 effects of other variables that happen to be correlated with gun ownership. In sum, these studies
10 do not establish, even weakly, that handgun purchases increase the likelihood of a person
11 committing suicide, and certainly do not establish an effect on impulsive suicides, as M claims.

12 To be sure, a very small number of suicides are preceded by a handgun purchase a short
13 time before. This does not, however, establish that the handgun purchase had any effect on the
14 likelihood of the suicide. Imagine a person who, after weeks or months contemplating suicide,
15 becomes determined to kill themselves, decides to commit the suicide with a handgun, but does
16 not already own one. Very likely they would buy a handgun for the purpose of killing themselves
17 and then kill themselves with it. One could not, however, reasonably assert that the handgun
18 purchase in any sense caused the suicide. Rather, the handgun purchase was merely the next-to-
19 last step in the process of committing a suicide that the person had already decided to commit.
20 Wintemute and his colleagues explicitly acknowledged this potential interpretation of their
21 handgun purchase/suicide association, conceding that “some purchasers bought handguns with the
22 intention of killing themselves” (p. 1587).

23 Most firearm suicides use guns they have had for years, and did not buy for purposes of
24 committing suicide (Cummings et al. 1997, p. 976), but among the few who do buy a gun shortly
25 before committing suicide, all may have done so for the specific purpose of committing a suicide
26 that they had already decided to commit. Certainly nothing in the extant research contradicts this
27 interpretation.

28 M asserts that “suicidal behavior is generally impulsive and 70% of suicide attempts act

1 less than one hour after deciding to kill themselves” (p. 7, lines 1-2). The statement is misleading
2 because it is accurate only with regard to suicide attempts and completed suicides using all
3 methods – *not firearms suicides in particular*. The single source that M cites to support this claim
4 (in his fn. 10, p. 7) had no evidence pertaining specifically to firearms suicides.

5 M likewise asserts that nonfatal suicide attempts are rarely followed by a later successful
6 (fatal) suicide attempt, but the sole source he cites to support this claim (Owens 2002) again
7 pertained only to suicides in general, containing no information about firearms suicide attempts in
8 particular.

9 The reason this distinction is important is because firearms suicides are different from most
10 other suicides in crucial ways that bear on how preventable they are. While many suicides *in*
11 *general* are impulsive, Fox and Weissman (1975) found that this was less true of suicide
12 attempters who used shooting and other more serious methods. Likewise, while most suicide
13 attempts *in general* are not followed by subsequent suicide attempts, at least three studies have
14 found that attempts using the *more lethal* methods, including shooting, are more likely to try to kill
15 themselves again if their initial attempt failed (Tuckman and Youngman 1963; Eisenthal,
16 Farberow, and Shneidman 1966; Tuckman and Youngman 1968). This supports the view that
17 suicide attempts made with firearms are more seriously intended, committed by more lethally
18 minded attempters who had more long-lasting motives to commit suicide.

19 **Section III**

20 The authors of case-control studies of the guns/suicide association are usually silent on the
21 question of just how or why gun ownership would increase the risk of suicide, perhaps because
22 they consider it to self-evident. M. makes very explicit a specific reason why handgun purchases
23 or ownership would cause an increased risk of suicide, and not merely lead to substitution of other
24 methods. He claims that “attempted suicide using a firearm is more often fatal than any of the
25 other means of suicide amongst those in the top ten most frequently used methods” (p. 8, lines 8-
26 9). He cites just two studies in support of this extreme claim (Chapdelaine et al. 1991 and Spicer
27 and Miller 2000, in his fn. 21).

28 M’s citation of the Chapdelaine et al. study, however, seems to be mistaken. This article

1 did not have any evidence on fatality rates of suicide attempts using different methods. The
2 Chapdelaine et al. study cannot be seen as supporting the position for which it is cited.

3 As to the one relevant study cited by M (Spicer and Miller 2000), this is the most extreme
4 and unrepresentative of all the studies on this topic, reporting a far larger difference in fatality
5 rates between shooting and hanging suicide attempts than any other study. Thus, having it be the
6 only real supporting source (given the inaptness of the Chapdelaine et al. study) is unsound. The
7 *full* body of research is reviewed in my Exhibit 3. There have been *seven* previously published
8 studies comparing the fatality rates of suicide attempts by shooting with attempts by hanging, and
9 the Spicer and Miller study is the *only* one to indicate a large difference in fatality rates between
10 these two methods. Indeed, two prior studies indicate somewhat *lower* fatality rates of shooting
11 attempts than hanging attempts, and the rest indicate only slight differences in fatality rates.

12 In Exhibit 3 I have added to the body of evidence by analyzing a far larger set of suicides
13 and attempted suicides than has ever been previously examined, covering the entire United States
14 for the most recent 14-year period for which the relevant data are available. The analysis indicates
15 that there is no significant difference between the fatality rates of firearm and hanging suicide
16 attempts. Thus, M is mistaken – suicide attempts using a firearm are *not* more often fatal than any
17 other means of suicide.

18 People only need one method to commit suicide, and hanging is one method that is just as
19 lethal as shooting. Further, hanging is already the second most common method of suicide after
20 shooting, and only requires materials (rope or something like it for a noose, and a sturdy support
21 for the noose) that are essentially universally available. In sum, there is no sound reason to believe
22 that there would be anything less than 100% substitution of hanging among persons who otherwise
23 would have used a firearm to commit suicide.

24 **Section IV**

25 In his section IV, M makes the unexceptionable assertion that multiple strategies should be
26 adopted to prevent suicides, but does not make an evidence-based case for why controls on
27 handguns should be one of those strategies. He relies on his own unpublished review to support
28 the claim that “states in the USA that have enacted more broad or multifaceted legislation have

1 been more successful at lowering *firearm* suicide rates” (p. 9, lines 1-2, emphasis added). This
2 assertion, however, is not the same as a claim that gun control legislation prevents suicide or saves
3 lives. If the only thing that gun laws accomplished was to reduce *firearm* suicide rates, but
4 without reducing total suicides, there would be no savings of lives and no benefit to the public.
5 This issue is explained at greater length in my Exhibit 4.

6 In any case, none of the studies that M reviewed assessed the impact of gun control laws on
7 impulsive firearms suicides, nor did any of them assess the impact of restrictions on gun store
8 signage on firearms suicides, impulsive or otherwise. M notes that “guns used for suicide are
9 bought a mean of 11 years before the suicide” (p. 9, lines 2-3) but does not discuss the fact that this
10 contradicts the picture he paints of people committing firearms suicides impulsively after buying a
11 handgun.

12 M. asserts that “young people and many adults are ... more likely to buy a gun
13 impulsively” but does not cite any evidence in support of this proposition. This is because, to my
14 knowledge, there is no such evidence. Recall that it is only handgun purchases from gun stores are
15 relevant to the current case. M does not acknowledge that no “young people” under the age of 21
16 years can legally buy a handgun from a gun store (or any other licensed source) anywhere in the
17 U.S., impulsively or otherwise, as this is prohibited by the federal Gun Control Act of 1968.

18 There is an underlying assumption needed to plausibly argue that gun control laws reduce
19 total suicides: the assumption that firearm prevalence increases the total suicide rate. That is, the
20 causal chain assumed by the authors of all of the gun control studies cited by M is: Gun Control
21 Laws reduce Gun Prevalence, and Gun Prevalence has a positive effect on total suicide rates. In
22 his Section IV, M specifically argues that higher gun prevalence causes higher *firearm* suicide
23 rates (p. 7, lines 10-18), though he says nothing about whether it affects total suicide rates.

24 My Exhibit 4 reviews the entire research literature on the effect of firearm prevalence on
25 suicide rates. It shows that although firearm ownership levels affect rates of *firearm* suicide, they
26 have no effect on the total suicide rate, and thus do not affect how many people kill themselves.
27 Gun prevalence levels only affect the choice of method for suicide, not how many total suicides
28 are committed. Perhaps this is why M so carefully states only that gun ownership rates affect “the

1 firearm suicide rate” (p. 7, lines 10-17; p. 8, lines 1-2). Thus, reducing gun prevalence through
2 expanded gun control, or by any other means, would not reduce the number of suicides.

3 M’s very constricted review of studies on the impact of gun laws on suicide rates relies
4 solely on the most methodologically primitive studies (his fn 28-30), and ignores the most
5 technically sophisticated study, that of Kleck and Patterson 1993 (p. 274 and associated text),
6 which simultaneously assessed the impact of 19 different types of gun control on total suicide
7 rates, firearm suicide rates, and on firearm suicide rates, and controlled for more than a dozen
8 potential confounding variables. This study indicated that gun laws do not affect total suicide
9 rates.

10 To my knowledge, there are no studies of the impact of restrictions on gun store signage on
11 rates of suicide or any other form of violence or crime, nor did M cite any such studies. He
12 appears to assume that if there are *any* gun control laws that are effective in reducing *any* kind of
13 suicide, then this must imply that California’s restrictions on gun store signage must also be
14 effective in preventing impulsive suicides. If this is not his premise, there was no point to his
15 citation of research on the effects of a miscellany of other gun control measures.

16 **Section V**

17 M appears to lack professional expertise to offer regarding the topics addressed in Section
18 V. His remarks consist of unsupported personal opinions, linked together with speculation. For
19 example, he “predicts” that invalidation of section 26820 would increase handgun sales, which
20 would in turn cause increased handgun suicides, but offers no evidence to support either
21 prediction. He bases his opinion on “the strong relationship between gun availability and the risk
22 of *firearm* suicide” (p. 11, line11, emphasis added). Note once again that M does not claim that
23 increased handgun sales would increase the total number of people who would kill themselves, but
24 only the number who would do so with firearms. As shown in Exhibit 4, most studies, and
25 certainly the methodologically strongest studies, indicate that gun levels affect rates of firearm
26 suicide but not total suicide. Thus, there is no sound foundation for predicting that an increase in
27 handgun sales would increase total suicides, and it is trivial from the standpoint of the public’s
28 wellbeing whether increased sales would only affect the percent of suicides that were committed

1 with firearms.

2 M's implied prediction that invalidation of section 26820 would increase impulsive
3 handgun purchases from gun stores is especially implausible in light of the existence of
4 California's 10-day waiting period requirement, which makes it impossible for anyone to buy a
5 handgun from a gun store and take possession of it quickly. People might *pay* for a handgun
6 impulsively, but they could not take physical possession of it quickly, and only a handgun that a
7 person physically possesses can be used to commit suicide.

8 In sum, M does *not* establish that the availability of firearms causes increases in the risk of
9 suicide, either impulsive or not, does *not* establish that attempted suicides with firearms are more
10 fatal than attempted suicides by all other means, does *not* establish that either restrictions on gun
11 store signage or gun control laws in general reduce the number of suicides, and does *not* establish
12 that invalidation of section 26820 would increase suicides, impulsive or otherwise. His opinions
13 are all either contradicted by reviews of the full array of relevant research studies or have no
14 logical connection with the research he cites.

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