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KATZ, J., with whom BORDEN and NORCOTT, Js., join, dissenting and concurring. In the present case, the state had the burden of proving beyond a reasonable doubt that the defendants, Bethzaida Padua, Wilfredo Calvente and Miranda Virgilia Calvente, had created a situation that was *likely* to harm the health of a child. See General Statutes (Rev. to 1999) § 53-21 (1).[1] This court previously has established that, within the context of § 53-21, the term ''likely'' means ''when particular subject matter will *probably* come to be or when its chances of realization are more *probable* than not.'' (Emphasis added.) *State* v. *Romero*, 269 Conn. 481, 491, 849 A.2d 760 (2004). Thus, the state was required to prove that harm probably would have come to the minor victims had they ingested some of the raw marijuana within their reach. The question, therefore, is whether it is such common knowledge that the ingestion of raw marijuana is likely to harm a child that the state did not have to produce expert testimony as to that fact. See *LePage* v. *Horne*, 262 Conn. 116, 125, 809 A.2d 505 (2002) (''[e]xpert testimony is required 'when the question involved goes beyond the field of the ordinary knowledge and experience' '' of average juror). In part I of its opinion, the majority concludes, relying almost entirely on marijuana's illegality, that it is common knowledge that orally ingesting raw marijuana is likely to harm a child and, therefore, that no expert witness was required.

Common knowledge is limited, however, to those well substantiated facts that are obvious to the general community. See *American Tobacco Co.* v. *Grinnell*, 951 S.W.2d 420, 427 (Tex. 1997). Upon careful examination of the available resources on the subject, I would conclude that the effects of eating raw marijuana are far from obvious, largely unreported, and, to the extent that they are discussed outside the mainstream media, they are widely disputed. Accordingly, I would conclude that the state should have been required to present expert testimony concerning the possible injurious effects of ingesting raw marijuana, and, thus, I would affirm the judgment of the Appellate Court with respect to the defendants' risk of injury convictions. See *State* v. *Padua*, 73 Conn. App. 386, 398, 808 A.2d 361 (2002).

Although the concept of common knowledge plays a significant role in our jurisprudence, this court never explicitly has defined its meaning. Similarly, despite its universal importance, very few courts outside Connecticut have endeavored to provide a standard by which to determine when a matter rises to the level of common knowledge. See G. McDonald, ''The Common Knowledge Doctrine in Medical Malpractice Litigation,'' 16 Los Angeles Lawyer 24, 28 (May 1993) (Very little deci-

sional law has defined common knowledge, even if many cases have dealt with its effects. Seemingly, ''[c]ommon knowledge amounts to a body of unreflective wisdom or insight held by the ordinary run of humanity, gained from observation, experience, acculturation and popular education, about how peers usually conduct themselves in relation to familiar stresses and challenges in the environment.''). The few jurisdictions to do so have cited the definition set forth in various editions of Black's Law Dictionary. See *Mulroy* v. *Western Resources, Inc.*, 97 P.3d 528, 2004 WL 2085589 (Kan. App. 2004); *Creech* v. *W.A. Foote Memorial Hospital*, 2004 WL 1258011, *11 (Mich. App. June 8, 2004); *Brune* v. *Brown Forman Corp.*, 758 S.W.2d 827, 830–31 (Tex. App. 1988); see also *Tipton* v. *Tabor*, 538 N.W.2d 783, 788 n.1 (S.D. 1995) (Erickson, J., concurring in part and dissenting in part) (citing Black's Law Dictionary [6th Ed. 1990] and defining common knowledge as ''knowledge that every intelligent person has, and includes matters of learning, experience, history, and facts of which judicial notice may be taken''). According to the most recent edition of that dictionary, common knowledge is defined as a ''*fact* that is so widely known that a court may accept it as true without proof.'' (Emphasis added.) Black's Law Dictionary (8th Ed. 2004). In order for something to be considered a fact, it must, at the very least, generally be accepted as true and have a basis in reality. See id. (defining ''fact'' as ''[s]omething that actually exists; an aspect of reality''). Therefore, common knowledge is not tantamount to a common belief that may be nothing more than a perception grounded in folklore, not reality.

The fundamental distinction between that which is merely a common belief and that which is common knowledge[2] is illustrated by the following example in a book review addressing, inter alia, the flaws of eyewitness identification. See E. Loftus & E. Greene, Book Review, ''Twelve Angry People: The Collective Mind of the Jury,'' 84 Colum. L. Rev. 1425, 1431–32 (1984). ''In a recent survey over 500 people in Dade County, Florida, were asked '[d]o you think that the memory of law enforcement agents is better than that memory of the average citizen?' Fifty percent of sample answered 'yes' and thirty-eight percent said 'no.' Yet empirical research comparing police to others paints a different picture. Some researchers suggest that the police may occasionally pay special attention to particular details in their environment; for example, a clean license plate on an otherwise dirty car. Studies consistently find, however, that police officers are not superior to civilians as eyewitnesses.'' Id., 1432. Thus, while a common belief could be nothing more than a widespread misconception, ''common knowledge encompasses only those things so patently obvious and so well known to the community generally, that there can be no question or dispute concerning their existence.'' (Internal quotation marks

omitted.) *American Tobacco Co.* v. *Grinnell*, supra, 951 S.W.2d 427. Accordingly, a common misperception is not the legal equivalent to common knowledge so as to supplant evidence necessary to establish an essential element of the state's case.

In my view, having established that the field of common knowledge is limited to obvious facts, the potentially harmful effects of orally ingesting raw marijuana can only be considered common knowledge when the question actually has been examined and the results are largely undisputed. This threshold is consistent with this court's decision in *State* v. *Clark*, 260 Conn. 813, 822, 801 A.2d 718 (2002), wherein we considered whether the trial court properly had refused to allow the jury to consider whether a witness' ability to perceive and relay events may have been impaired by smoking five marijuana cigarettes within a short time period prior to observing the defendant at the crime scene. In concluding that the effects of smoking marijuana on one's ability to perceive and relate events was a matter within the jury's common knowledge, ''[w]e recognize[d] that, because it is an illegal substance, it may be that many jurors may have no firsthand knowledge regarding the effects of marijuana on one's ability to perceive and to relate events. [Nevertheless], we cannot blink at the reality that, despite its illegality, because of its widespread use, many people know of the potential effects of marijuana, either through personal experience or through the experience of family members or friends. . . . The unfortunate prevalence of marijuana use, coupled with the substantial effort to educate all segments of the public regarding its dangers, underscores the reality that the likely effects of smoking five marijuana cigarettes in a short period of time before an incident are within the ken of the average juror.'' (Citations omitted.) Id., 824–25. Thus, the average juror would have been exposed, through observation, experience, acculturation and popular education, to sufficient facts to form a reasoned conclusion on the matter, and, therefore, expert testimony was not required. Id.

Although we concluded in *Clark* that the effects of smoking marijuana are within the common knowledge of jurors, the effects of orally ingesting raw marijuana are not similarly known.[3] The ingestion of raw marijuana is not a practice engaged in by even a statistically significant minority of the population.[4] Furthermore, the effects of eating raw marijuana have not been reported in mainstream media and are addressed only in anecdotal evidence disseminated by advocacy groups or indirectly in medical literature.[5] Indeed, within that limited sphere, there are conflicting views as to whether the ingestion of raw marijuana has an adverse effect. The only case law my research has uncovered addressing the effects of ingesting raw marijuana is an administrative decision indicating that it is not harmful. See *In the Matter of Marijuana Rescheduling Petition*,

Docket No. 86-22, Drug Enforcement Administration (September 6, 1988). In that case, an administrative law judge for the Drug Enforcement Administration concluded: ''In strict medical terms marijuana is safer than many foods we commonly consume. For example, eating ten raw potatoes can result in a toxic response. By comparison, it is physically impossible to eat enough marijuana to induce death. . . . Marijuana, in its natural form, is one of the safest therapeutically active substances known to man.'' Id., 58–59. ''In layman terms . . . [a] smoker would theoretically have to consume nearly 1,500 pounds of marijuana within about fifteen minutes to induce a lethal response.'' Id., 58. Advocacy groups also have posted anecdotal information on the internet positing that it is not harmful. See, e.g., T. Scott ed., ''The Truth Tree,'' at http://www.truthtree.com/marijuana_eating.shtml (''The active ingredients in cannabis . . . [are] fat and alcohol soluble . . . . Marijuana must be heated before being consumed to activate the cannabanoids so one cannot simply eat raw grass.''); F. Patenaude, ''An Interview with Nazariah: Veganism and the Raw Food Movement,'' at http://www.lifeessentials.ms11.net/anazariah.html (''[Y]ou won't get high at all if you eat raw marijuana. And a lot of . . . people can relate to that. They tried raw marijuana—eating it, and nothing happened to them. They've tried cooking it and eating it, and they did get high.''); ''Instinctotherapy: why it 'stincts,' '' at http://www.ecologos.org/instinctotherapy.htm (''Several of my colleagues have had a go at raw Indian hemp (cannabis). One of them . . . tried a few leaves and finding them tasty, he went on eating . . . [and] nothing happened. No hallucination, no arousal, no laughing fits, nor any of the symptoms common on marijuana.''); K. Valente, ''Pot-heads fight back,'' at http://emedia.leeward.hawaii.edu/kamanao/apr_potheads.html (''The active chemical in marijuana, delta-9 THC, is found in crystal-like trichomes on the leaves of the cannabis sativa plant. In order for a person to get high, the delta-9 THC must be broken down as humans lack the enzymes to effectively make usable THC oil in its raw form. This is why simply eating marijuana will not get a person high.'').

Admittedly, there also is anecdotal evidence on the internet to support the contrary view that orally ingesting raw marijuana could be harmful to a child because it induces either a psychoactive effect or sickness. See M. Litchfield, ''Cannabis Consumption FAQ,'' at http://www.erowid.org/plants/cannabis/cannabis_faq_consumption.shtml (''It is a myth that dried marijuana must be heated before being consumed to activate the cannabanoids. Many people find that raw cannabis leaves and buds can be eaten for strong effects without any pre-heating.''); ''Marijuana,'' at http://www.drugtext.org/library/books/recreationaldrugs/marijuana.htm (''Marijuana must be cooked before it is eaten or used as a recipe ingredient.

Raw grass is abrasive to the stomach and can cause nausea and/or painful ulcers.''); B. Julin, ''Cannabis/Hemp/Marijuana Complete F.A.Q.,'' at http://www.totse.com/en/drugs/marijuana/162273.html (''Many populations have grown hemp for its seed—most of them eat it as 'gruel' which is a lot like oatmeal. The leaves can be used as roughage, but not without slight psychoactive side-effects.''). The limited scope of this debate regarding the potential effects of eating raw marijuana and the overall lack of research I have found on the subject suggest that it is a question that rarely has been examined, and, hence, the effects of orally ingesting raw marijuana are something about which we cannot be certain. Thus, whatever conclusion the average juror might reach about the effects of ingesting raw marijuana would be based on nothing more than pure speculation.

A conclusion falls outside the field of common knowledge if it ''involves obscure and abstruse medical factors such that the ordinary layman cannot reasonably possess *well-founded* knowledge of the matter and could *only indulge in speculation* in making a finding . . . .'' (Emphasis added; internal quotation marks omitted.) *Gross* v. *Victoria Station Farms, Inc.*, 578 N.W.2d 757, 762 (Minn. 1998). Thus, there is a distinction between a fact that the average juror reasonably could find to be true based on the presentation of credible lay testimony during a trial, or based on their own personal knowledge, and a fact that a juror reasonably could find to be true based only on pure speculation in the absence of expert testimony. Speculation is not the legal equivalent to common knowledge such that no evidence would need to be presented to establish an essential element of risk of injury. Accordingly, in the present case, I would conclude that the harmful effects of orally ingesting raw marijuana fall outside the field of common knowledge because the matter is so obscure.

In *State* v. *Graham*, 134 N.M. 613, 81 P.3d 556 (App.), cert. granted, 134 N.M. 723, 82 P.3d 534 (2003), the New Mexico Court of Appeals reached precisely this conclusion. In the course of a search of the defendant's home, the police found a bud of marijuana in a crib in the master bedroom and a partially smoked joint on the floor in an area that was readily accessible to the defendant's two children, who also were inside the house. Id., 616. The defendant was charged under New Mexico's child endangerment statute, which required the state to prove beyond a reasonable doubt that the ''[d]efendant caused the children to be placed in a situation which endangered [their] life or health . . . .'' (Internal quotation marks omitted.) Id., 617. At trial, the children's mother, the defendant's girlfriend, testified that if her children had gotten ahold of the marijuana, they ''probably would have ate . . . it and got sick.'' (Internal quotation marks omitted.) Id., 618. Her testimony was the only link between the marijuana and a potential danger to the children. Id. The court

overturned the defendant's conviction due to insufficient evidence because ''[t]here was no other testimony regarding the degree of danger the drugs presented, had the children gotten [a]hold of them.'' Id., 619. The court noted: ''The [s]tate's forensic chemist identified the drugs, but offered no expert opinion as to the marijuana's toxicity or the harm, if any, it posed to the children. The district court was not presented with evidence to determine the potential danger involved in ingesting marijuana, although such evidence appears to exist.'' Id.

Similarly, the reasoning of the Texas Court of Appeals in an analogous context is illuminating. In *Brune* v. *Brown Forman Corp.*, supra, 758 S.W.2d 827–28, the plaintiff filed a wrongful death action on behalf of her daughter, who had died as a result of acute alcohol poisoning after taking several shots from a bottle of tequila, naming as defendants the companies that had manufactured, distributed and sold the tequila. The issue before the court was whether the risk of death from acute alcohol poisoning is common knowledge such that there was no duty to warn as a matter of law. Id., 831. Significantly, the court distinguished between what is common knowledge regarding the *intoxicating* effects of drinking alcohol and the relatively unknown *fatal* effects of alcohol poisoning. Id. The court explained that, ''common knowledge encompasses those facts which are so patently obvious and so well known to the community generally, that there can be no question or dispute concerning their existence. For instance, there can be no dispute that there are twelve inches in a foot, that the sun rises in the morning, or even that a person drinking alcoholic beverages will become intoxicated. On the other hand, the length in inches of a particular object, the location of the sun at a specific point in time, or the level of intoxication and its effect on a particular person at a specific time, all involve facts which could be subject to dispute and which could never be ordinary common knowledge to the community. This is because a matter of common knowledge is information known by the public generally based upon indisputable facts. Therefore, the more disputable a fact may be, the less likely it will belong to that narrow set of facts judicially recognized as common knowledge. Unlike the examples cited . . . the fatal propensities of acute alcohol poisoning cannot be readily categorized as ordinary common knowledge. Although there is no question that drinking alcoholic beverages will cause intoxication and possibly even cause illness is a matter of common knowledge, we are not prepared to hold, as a matter of law, that the general public is aware that the consumption of an excessive amount of alcohol can result in death. We realize that there is no clear line between what is and is not common knowledge, but where facts . . . show how easily disputed the knowledge of the fatal propensities of alcohol

may be, we will not recognize it as common knowledge as a matter of law.'' Id., 830–31.

Brune illustrates that the consequences of one type of use of a given substance can be common knowledge while the consequences of a different type of use may remain unknown and unproven. Notably, the Texas Court of Appeals necessarily evaluated the common knowledge of jurors with respect to fatal alcohol poisoning in the late 1980s. The more recent and unfortunate rash of reporting such problems on our college campuses may now make such a matter one of common knowledge. Indeed, what is common knowledge changes over time. ''As would be expected, some of the information that is now considered common knowledge would not have been considered common knowledge in generations past. There is also knowledge that was once a matter of common knowledge but can no longer fairly be considered as such.'' J. Bucci, ''Revisiting Expert Testimony on the Reliability of Eyewitness Identification: A Call for a Determination of Whether it Offers Common Knowledge,'' 7 Suffolk J. Trial & App. Advoc. 1, 3–4 (2002). Perhaps at some time in the future, it will be common knowledge as to whether orally ingesting raw marijuana would cause a risk of harm to a child. Despite the fact that many people might assume, if asked, that raw marijuana would cause harm; see footnote 3 of this opinion; that conjecture is not a sufficient basis upon which to relieve the state of its obligation to present evidence to prove an essential element of the crime beyond a reasonable doubt. Therefore, I would conclude that the state should have been required to present expert testimony concerning the possible injurious effects of the oral consumption of raw marijuana, and thus, I would affirm the judgment of the Appellate Court with respect to the defendants' risk of injury convictions.

Accordingly, I respectfully dissent with respect to part I of the majority opinion that reverses the judgment of the Appellate Court, which had ordered the risk of injury convictions be set aside. I concur with the majority opinion that the evidence was sufficient to sustain the defendant Miranda Virgilia Calvente's conviction of conspiracy to sell marijuana within 1500 feet of a public housing project, although I agree with and join the concurring opinion of Justice Borden with respect to the majority invoking this court's supervisory authority without deciding the constitutional issue of double jeopardy in connection with her conviction.

[1] General Statutes (Rev. to 1999) § 53-21 provides in relevant part: ''Any person who (1) wilfully or unlawfully causes or permits any child under the age of sixteen years to be placed in such a situation that . . . the health of such child is likely to be injured . . . shall be guilty of a class C felony.''

[2] This distinction—between common beliefs and common knowledge—is consistent with this court's requirement of expert testimony regarding standard of care in negligence cases for activities commonly engaged in by the public. Although an activity may be commonplace, the average juror must have a sufficient factual basis to ascertain the standard of care in order to relieve the plaintiff of the obligation to produce expert testimony

on that standard. Compare *Santopietro* v. *New Haven*, 239 Conn. 207, 228–29, 682 A.2d 106 (1996) (plaintiff required to introduce evidence to prove standard of care umpire must use in managing players' unruly behavior at amateur softball game, despite fact that it is not uncommon experience for parents to umpire their children's softball games) with *Bader* v. *United Orthodox Synagogue*, 148 Conn. 449, 454, 172 A.2d 192 (1961) (expert testimony not required to support plaintiff's claim that absence of proper porch railing was structural defect). This distinction is illustrated in *LePage* v. *Horne*, supra, 262 Conn. 117, wherein we considered whether expert testimony was needed to establish that a caregiver breached the standard of care by placing an infant on its stomach to sleep where that infant died of sudden infant death syndrome. Despite the fact that many jurors probably were parents, we concluded that an expert opinion was required because, even if the ordinary person had a general awareness of the risks associated with the prone sleep position, it was not common knowledge whether the risk of placing the infant in a prone position was appreciably greater than placing the infant in any other position. Id., 131–32. We noted that information on this matter had not been widely disseminated. Id., 128–31. We further acknowledged the common misperception that existed, until recently, that placing an infant on its stomach was the safest position. Id., 128–29.

[3] The majority in the present case relies on our discussion in *State* v. *Clark*, supra, 260 Conn. 824–26, to conclude that, because the effects of eating marijuana baked in brownies are well known and, because this practice is sufficiently widespread or known in mainstream culture, the risks of ingesting raw marijuana necessarily also are common knowledge. See part I A of the majority opinion. While I would agree that expert testimony would not be required if the court were considering the harmful effects of eating brownies that have been baked with marijuana, I have uncovered no evidence, nor has the majority cited to any, that either the ingestion of raw marijuana is a relatively common practice or its effects are widely reported. Thus, in my view, the *Clark* standard cannot apply to the present case because, unlike with marijuana brownies, information on the effects of eating raw marijuana cannot be readily known through popular culture. The majority further reasons that regardless of the method of ingestion, ''it is still a widely known fact that marijuana is an illegal drug that will adversely affect the recipient, whether it is smoked, baked, sauteed, infused into alcohol, brewed in a tea, eaten raw, or consumed in any other inventive manner.'' In my view, this is an inferential leap not warranted under, and indeed inconsistent with, *Clark*.

[4] Indeed, I question whether, prior to this case, an average juror would have contemplated that anyone intentionally would ingest raw marijuana. We recognize that there are cases in which: (1) a party has admitted to eating marijuana, but it is unclear in what form; see, e.g., *People* v. *Galambos*, 104 Cal. App. 4th 1147, 1153, 128 Cal. Rptr. 2d 844 (2002); *State* v. *Shepherd*, 110 Wash. App. 544, 552, 41 P.3d 1235 (2002); (2) a party has admitted to eating raw marijuana, without mention of whether the consumption had any effect on the person; see, e.g., *Caffey* v. *State*, 433 S.W.2d 900, 901 (Tex. Crim. App. 1968); and (3) a party has admitted to eating raw marijuana to avoid police detection. See, e.g., *State* v. *Miller*, 131 Wash. 2d 78, 81, 929 P.2d 372 (1997). One reasonably cannot conclude, however, on the basis of these obscure situations, either that the ingestion of raw marijuana is a widespread practice or that its effects are common knowledge. Indeed, in the one instance the majority cites when the effects of eating raw marijuana were considered, expert testimony was presented on the matter. See *Gudinas* v. *State*, 816 So. 2d 1095, 1104 (Fla. 2002) (toxicology expert testified about effect that eating raw marijuana day before and day of murder had on defendant). Similarly, even if we were to assume, without conceding, that information regarding the effects of eating raw marijuana on animals is instructive with respect to the potential effect on humans, the majority offers no reasonable basis upon which we could conclude that such information is within the ken of the average juror.

[5] The only reference I have found in medical literature is a brief mention of the dosage of marijuana necessary for a psychotropic effect. See Physicians' Desk Reference for Herbal Medicines (1st Ed. 1998) p. 712 (''[i]n most subjects the effect is registered following an oral dose of 20 mg. d-9-tetrahydrocannabinol'').