

Running head: MYTH OF THE GREEN FAIRY

The Myth of the Green Fairy: Distilling the Scientific Truth about Absinthe

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## Abstract

In spite of its history and illegality, the use of absinthe, the aperitif made famous in fin de siècle Parisian cafés, is on the rise again in the United States and abroad. Writers and artists like Baudelaire, Verlaine, Wilde, Van Gogh, Hemingway, Degas, Picasso, and Gauguin all prominently featured absinthe in their writing and art, often attributing their creativity, as well as emotional instability, to the effects of “la fée verte,” or the green fairy. Consequently absinthe has earned a reputation as a mysterious and dangerous substance capable of inducing all manner of psychosis, violence, and passion. Yet contemporary science shows that the absinthe myth cannot be accounted for by the pharmacological reality. This article describes the history of absinthe, the recent scientific developments, and uses a psychoanalytic framework to explain why the absinthe myth endures.

## INTRODUCTION

Absinthe, the aperitif made famous in fin de siècle Parisian cafés, has enjoyed both a prominent and mysterious role in the cultural histories of the United States and Western Europe. Writers and artists such as Baudelaire, Verlaine, Wilde, Van Gogh, Degas, Picasso, and Gauguin (Arnold, 1989; Conrad, 1988; Lanier, 1995) all prominently featured absinthe in their writing and art, often attributing their creativity, as well as emotional instability, to the effects of “la fée verte,” or the green fairy. In fact, Manet, Toulouse-Lautrec, Orphen, and Picasso all produced paintings or sketches entitled “The Absinthe Drinker” and many others produced works entitled “L’Absinthe.” Misunderstood and scapegoated in France, Spain, Britain, and the United States, absinthe was blamed for widespread mental illness, criminal behavior, and a variety of other social ills and was eventually prohibited in all of these countries except Spain. Reported to cause euphoria, mania, seizures, violence, hallucinations, blindness, even enlightenment, absinthe has risen to mythical proportions in the popular imagination (Vogt & Montagne, 1982). Yet contemporary science has shown that absinthe does not live up to its psychopharmacological reputation. Laboratory studies have repeatedly shown that absinthe does not possess hallucinogenic nor aphrodisiac properties, as has long been thought. In addition to the scientific literature, many popular books have recently been published which largely debunk the absinthe myth (Adams, 2004; Baker, 2001; Conrad, 1988; Wittels & Hermes, 2003). In spite of such knowledge, however, absinthe continues to be portrayed in the American popular media as a mysterious and dangerous substance, capable of inducing psychosis and aggression. Trailing by a long history of absinthe-inspired art and literature, recent films such as *Alfie*, *Moulin Rouge*, and *Bram Stoker’s Dracula*, invoke surreal, hallucinatory imagery in association with the liqueur, supporting Oscar Wilde’s famous comment, “After the first glass, you see things as you wish they were. After the second, you see them as they are not. Finally, you see things as they really are, which is the most horrible thing in the world (Beckson, 1997, p. 1).

## CULTURAL HISTORY

Absinthe's cultural legacy is probably most closely associated with Vincent Van Gogh. Since Van Gogh's death, scholars have speculated on the nature and cause of his mental illness and retrospectively suggested such diagnoses as Bipolar Disorder, epilepsy, acute intermittent porphyria, and thujone intoxication, (Albert-Puleo, 1981; Arnold, 1988, 1992, 2004; Arnold & Loftus, 1991; Berggren, 1997; Blumer, 2002; Bonkovsky et al., 1992; Harris, 2002; Monroe, 1991; Morratt, 1993). Many of van Gogh's seizures and hallucinatory episodes reportedly occurred immediately after drinking absinthe (Blumer, 2002). Most notoriously, when van Gogh cut off his ear it was purportedly during an absinthe binge after having fallen off the wagon of sobriety (Arnold, 1992). Other scholars have hypothesized that van Gogh's heavy use of absinthe caused a condition known as xanthopsia, a neuro-ophthal pathology which elicits yellow vision (Arnold & Loftus, 1991). The dominance of vibrant yellows can be seen in several paintings after 1886 such as *Sunflowers* and *The Night Café*. In a letter to his brother Theo, van Gogh wrote, "I kept myself going on coffee and alcohol...it is true that to attain the high yellow note that I attained last summer I really had to be pretty well keyed up" (Van Gogh, 1978). In another letter, van Gogh reveals insight into the relationship between his instability and creativity, "Now if I recover, I must begin again and I shall not again reach the heights to which sickness partially led me" (Van Gogh, 1978). Van Gogh had a well-known affinity for proconvulsant compounds, known as terpenes, also present in absinthe, and reportedly drank turpentine and slept on a pillow soaked in camphor (Arnold, 1988; Holstege, Baylor, & Rusyniak, 2002). Most recently, Arnold (2004) argued that acute intermittent porphyria, an inherited metabolic disease accounts for all of the symptoms of van Gogh's illness. The validity of these diagnostic hypotheses is beyond the scope of this article, but whatever the true diagnosis, it is likely that this association between van Gogh and absinthe is what has solidified the green fairy's role as a liaison between creativity and madness.

The use of absinthe is highly ritualized (Olsen, 2000; Wittels & Hermes, 2003), involving a special glass, an intricately crafted spoon, sugar cubes, and a water spigot (depicted, for example, in the foreground of Gauguin's *Dans un café à Arles*). The sugar cube is balanced over the glass on the perforated spoon and water is allowed to slowly trickle over it, eventually filling the glass and turning the absinthe from emerald green to a cloudy white. This turbidity, or *louche*, is produced by an emulsion of essential oils with the cold water as the alcohol content is lowered. Absinthe paraphernalia, incidentally, is currently collected around the world and comprises a highly valuable antiques market (Wittels & Hermes, 2003). The Musée de L'Absinthe in Auvers-sur-Oise, France has one of the largest collections of such items and its creator, Marie-Claude Delahaye, is one of the most respected absinthe historians in the world, with publications spanning the past two decades on which the more recently published cultural histories are based (see for example (Delahaye, 1983, 1990, 2000, 2001; Delahaye & Noël, 1999). David Nathan-Maister documents many of these collectibles, as well as absinthe-related art and memorabilia on his website ([www.oxygene.com](http://www.oxygene.com)).

The psychoactive ingredients of absinthe are comprised of wormwood, one hundred and forty-four proof ethanol, and essences of herbs and berries such as anise, juniper, and fennel. Ancient absinthe is believed to be different than modern absinthe, although it too was derived from wormwood. Ancient absinthe is believed to have originated in or around Greece and is referred to numerous times in the Bible (Aronson, 1999). Historical texts associate absinthe with Pythagoras, Hippocrates, and Galen, and it was apparently used medicinally, mostly for the purpose of killing intestinal worms. While modern absinthe is most closely associated with France, it in fact originated in Switzerland, in the Neuchâtel Valley. It was later distributed most widely by the French distiller Pernod, and was used to fortify French troops in the French-Algerian war who brought the taste for absinthe back with them to France, prompting the notorious *l'heure verte*

(green happy hour), associated with the cafés in the Montmartre district and the Latin Quarter in Paris.

After what are now commonly referred to as the “absinthe murders” in Vaud, Switzerland in 1905 in which Jean Lanfray, under the influence of absinthe and a host of other intoxicants, murdered his wife and children in cold blood, the temperance movement gained enough momentum to outlaw absinthe. Belgium and Holland had already outlawed it, and the United States, Iceland, Russia, Norway, and Finland, followed shortly thereafter. Absinthe, in fact, is the only single alcoholic beverage ever singled out for prohibition in any country (Conrad, 1988). Unfortunately, however, at the time of the absinthe bans, alcoholism was not well understood so it is unclear whether or not the deleterious effects of absinthe were really a consequence of the unique properties of the liqueur, rather than simply to garden variety alcoholism (Hold, Sirisoma, Ikeda, Narahashi, & Casida, 2000; Strang, Arnold, & Peters, 1999). At that time, “absinthism,” as it was known, was associated with gastrointestinal problems, auditory and visual hallucinations, epilepsy, brain damage, and other psychiatric illnesses, including suicide (Gambelunghe & Melai, 2002).

## **PHARMACOLOGY**

Scientists have long tried to uncover the chemical properties of wormwood and more specifically to understand its mechanism of action on the brain. Known botanically as *Artemisia absinthium*, wormwood is a perennial herb native to Europe, southern Siberia, and the Mediterranean. Other botanicals of the artemisia genus include sage and tarragon. Laboratory tests have shown that thujone is the toxic, psychoactive ingredient in wormwood, and can also be found in other conifers, such as juniper berry, nutmeg, and hemlock. Scientists long believed that thujone acted upon cannabinoid receptors in the brain because of its molecular similarity to tetrahydrocannabinole (THC) which has mild hallucinogenic effects. As recently as 1975 researchers were investigating thujone’s mechanism of action on the brain with the expectation that it possessed psychedelic or hallucinogenic properties. Del Castillo and his colleagues (del Castillo,

Anderson, & Rubottom, 1975) found a molecular similarity between thujone and  $\Delta^9$ -THC ( $\Delta^9$ -tetrahydrocannabinol) (Meschler & Howlett, 1999), and based on these shared chemical structures, concluded that thujone bound itself to the same receptor in the brain as  $\Delta^9$ -THC. At that time, however, what we now know as the CB1 cannabinoid receptor had not yet been discovered, and Del Castillo's research was both nascent and speculative. A decade later, the discovery of the CB1 cannabinoid receptor allowed researchers to conclusively test whether thujone bound itself to the same hallucination-causing receptors as THC. It didn't. Thus contrary to popular belief, thujone does not possess hallucinogenic properties.

Instead, recent research has found that thujone is a  $\gamma$ -aminobutyric acid type A (GABA<sub>A</sub>) antagonist, meaning that it decreases the presence of the neurotransmitter GABA in the brain, thereby producing an analeptic (excited) state of consciousness (Gambelunghe & Melai, 2002). Alcohol, on the other hand is a GABA agonist, meaning that the two active ingredients of absinthe work at odds with one another. "It gets you up like speed, then it caves you in. It's like a bad speedball" (Steinmetz, 1996). Many other drugs, both licit and illicit, are either GABA agonists (benzodiazepines, barbiturates) or GABA antagonists (caffeine, cocaine). The effects of thujone then are anxiogenic (anxiety-provoking), analeptic, mood-elevating, and convulsant, while the effects of ethanol alcohol are antidepressant, amnestic, and disinhibitory.

Like many other botanical compounds, the convulsant properties of thujone can cause seizures and eventually death in high enough doses. Laboratory tests on rats; however, have shown that in order to reach levels of thujone high enough to cause seizures, one would already have suffered alcohol poisoning long before. In other words, the high concentration of alcohol present in absinthe is far more dangerous than the wormwood (Strang et al., 1999). This is particularly true of currently manufactured, or "new" absinthe, which is regulated by the European Union, and can have no more than 10ppm (parts per million) of thujone. It is unclear, however, whether this was also true a century ago. Some scientists have speculated that absinthe at that time contained

concentrations of thujone as high as 260ppm (Arnold, 1992), yet samples from sealed vintage bottles of absinthe have been analyzed and have not been found to have higher thujone content (Hutton, 2002). Many simply attribute the misbehavior associated with absinthe to the fact that much of it was often distilled in private homes in poor conditions, by individuals with little knowledge of proper distilling practices, who were in effect manufacturing poison. To even further complicate matters, several major distributors in the early 1900's were discovered to have added harmful additives to their absinthe to replicate the exact shade of green found in Pernod, the leading name-brand of absinthe, now sold as an anise flavored liqueur without the wormwood (Wittels & Hermesch, 2003).

### **CONTEMPORARY UNDERGROUND ABSINTHEURS**

Undeterred by the scientific studies which have demonstrated thujone's mechanism of action on the brain, the mythic lore surrounding the green fairy is unyielding. With absinthe bars springing up around the globe in places like Barcelona, Sao Paulo, Berlin, Santiago, Prague, and Vancouver, the desire for absinthe grows, particularly when mega-stars such as Marilyn Manson and Johnny Depp publicly extol its virtues to audiences (Wittels & Hermesch, 2003). The fear and glamorization of the mysterious, illicit emerald aperitif surfaces frequently in contemporary film, music, and television. In a recent interview in Spin magazine, Manson said, "It's not the first record I've made while drinking absinthe, but this album does embrace the release of imagination that absinthe taps into. Listen to the title track: That song was completely written and recorded in twelve hours, on one bottle of absinthe. That song sounds like absinthe" (Klosterman, 2003). Stoked by such celebrity endorsement, absinthe internet chat rooms and online commerce have flourished, and underground absinthe communities have sprung up around the United States and the world, resurrecting debates over the green fairy.

This resurgence has created an underground community in the U.S, where absinthe remains illegal. This community is largely brought together through the internet, comprised of individuals

who either distill their own absinthe or obtain it in one of the European Union countries where it is legal and smuggle it back into the United States. Many also order absinthe over the internet and have it delivered via courier services (Shaw, 1999). In 2004, I began an ethnography of the contemporary underground absinthe culture in the United States using participant interviews and information from websites and chat rooms. Results from this study will be reported elsewhere; however, some of the following information about this community comes from preliminary data I've collected.

### **WHY THE ABSINTHE MYTH ENDURES**

It is likely a constellation of factors which explains why the absinthe myth endures in spite of published evidence to the contrary. The heyday of modern absinthe occurred roughly between 1890 and 1910 -- the same time as the birth of psychoanalysis and in roughly the same regions of Western Europe. I suggest that absinthe from the start became a repository for projected cultural fears about sexuality, madness, and aggression, which can be seen in the imagery surrounding absinthe from that time. In France and Switzerland in particular, absinthe served as the battleground for the temperance movement and posters and postcards from that era personify absinthe alternatively as a sexualized temptress or a menacing grim reaper. It was precisely at this time that Freud posited that the unconscious was dominated by internal conflict characterized by sexual and aggressive impulses – an idea which was ill-received in the tightly buttoned Victorian culture. To demonize absinthe, then, was a way of both externalizing and repressing socially unacceptable impulses at a time when Freud and other early psychoanalytic thinkers were confronting the culture with ideas about the dangerous, sordid, and psychotic forces of the unconscious. Thus absinthe, from the very outset, became entwined with and symbolic of what Freud referred to as primary process impulses and fantasies (Freud, 1998).

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The notion of regression, fundamental to these unconscious primary processes, can help us make sense of absinthe's powerful cultural symbolism. Regression refers to playing with boundaries of self, identity, and reality as well as allowing freer access to visual and primary process modes of thought (Knafo, 2002). Involvement in the underground absinthe world, as well as the endurance of the absinthe myth, is regressive in a number of ways. Specifically, the drinking of absinthe, because of its charged cultural associations and its intoxicating effect, psychologically allows for the creation and enactment of a ritualized and regressive fantasy world that is sufficiently ambiguous to allow for the projection of unconscious wishes and fantasies. As one contemporary absintheur notes, "People are romantically attracted to Victorian-era drugs. A lot of the creators of that era credited these drugs with their inspiration, and people are now interested in checking them out first hand." (Hamilton, 1994). In the same way absinthe served as a target of projected unconscious fantasy at the turn of the century, it continues to serve the same kind of function today.

Many of the absintheurs I have interviewed make reference to their interest in "cocktail culture" or what is sometimes called "cocktail archaeology" (Haigh, 2004), which is the drinking of vintage and forgotten cocktails. The cocktail culture focuses on American, jazz age, prohibition-era cocktails, with the associations and references to Hemingway, bootleggers, flappers (or good-time girls), and the mafia; whereas the absinthe culture is seeded in bohemia, the post-impressionists, madness, and violence. Notice however that in the cocktail culture there is the same convergence of the literary, criminal, sexual, and aggressive that we see in the absinthe culture. Both of the two cultures are glamorized in parallel ways, associated with youth, art, and even death. Both eras are

romanticized as rebellious, charming, and sexually liberal, creating a kind of cultural nostalgia and fantasy world.

Volkan (1988) has introduced a concept which he calls “suitable targets of externalization”, which refers to the ways individuals engage and appropriate symbols, events, or cultural artifacts to mediate the ways in which they interact with others and define their identities in relation to community. Such suitable symbols become imbued with “psychological magic” which is derived from the reality that “such symbols are cathected with and therefore represent aspects of the self” (Ainslie & Brabeck, 2003). As we see in the case of absinthe, its users articulate a fantasy associated with a very specific time, place, and sensibility. In other words, absinthe is the psychological bridge to a zeitgeist—a bridge which possesses just the kind of psychological magic to which Volkan refers. It is, in effect, play-acting.

I had a patient recently tell me that she used to frequent the hottest dance clubs every Friday and Saturday night, until one time she was in a nightclub at closing when bright lights came on and she looked around and saw how ordinary and unsexy everyone was. The primitive darkness, surging music, and scanty clothes had created a romanticized illusion, a seething cauldron, if you will, of wanton desire and sexuality. Then the spell was broken. In the course of my research I’ve often thought that contemporary absinthe drinkers have unconsciously cloaked absinthe in a similarly primitive and thrilling veil in order to experience the pleasure and secret safety of this regressive experience, when in fact it’s no different than having a few friends over for a martini.

Much like Halloween serves as an agreed upon ritual for expressing our more primitive forces, the drinking of absinthe is a constructed ritual which provides relative safety in acting out fantasies, but is just socially deviant enough to be titillating. As Sandler and Sandler write (1994), “Society has found it necessary to create situations in which licensed regression can take place – in a sense, organised and acceptable holidays from the work of anti-regression. We are referring here

to parties, having a drink in the evening, reading novels, watching films, crowd behaviour, making love, and a myriad other ways in which...we relax the regressive function” (p.433).

Psychoanalysts Ross and Ross (1983) analyze the adaptive psychological function of ritual, by using Turner’s notion of liminality (1969) and Huizinga’s (1949) work on play: “Play accomplishes...this freedom to create images – to use imagination – in the effort to make dreams, fantasies, and ideals briefly real. Although play occurs in spatial and temporal areas separate from the realities of everyday life, some of its richness lingers on; the products of play – the music, visual images, and so on – remain long after the game is over...The attitudes and products of these creative and free periods enrich the social structure and prevent it from becoming oppressively static. The myths, symbols, philosophical systems, and artworks that emerge during liminality remain after games and celebrations end – they remind us of what lies beyond the organized routines of day-to-day living (p. 31-32).” Because of absinthe’s mysterious history and current illegality in the U.S., it provides a sufficiently evocative and ambiguous backdrop on which to impose fantasy and play; whereas a jello shot or a can of Bud Lite just won’t do the trick.

Historically the attribution of magical powers to food and drink is nothing new. Often the magic is in the form of sex (aphrodisiacs) or aggression (poison or witchcraft). “Foods that alter consciousness have been used throughout history to enhance lovemaking, allowing humans to briefly glimpse the euphoria of the gods. Alcohol has long been the premier intoxicant, requiring only the addition of a loaf of bread and thou to experience paradise. The provenance of Dionysius, Bacchus, and earlier divinities, wine was the primary medium by which ancient Greeks and Romans experienced the world of the gods. Dionysian rites often included both wine and sex to induce ecstatic intoxication” (Hospodar, 2004). Thus, the myth of absinthe serves the important regressive functions of play and fantasy through its properties as an intoxicant and culturally nostalgic associations.

## CONCLUSION

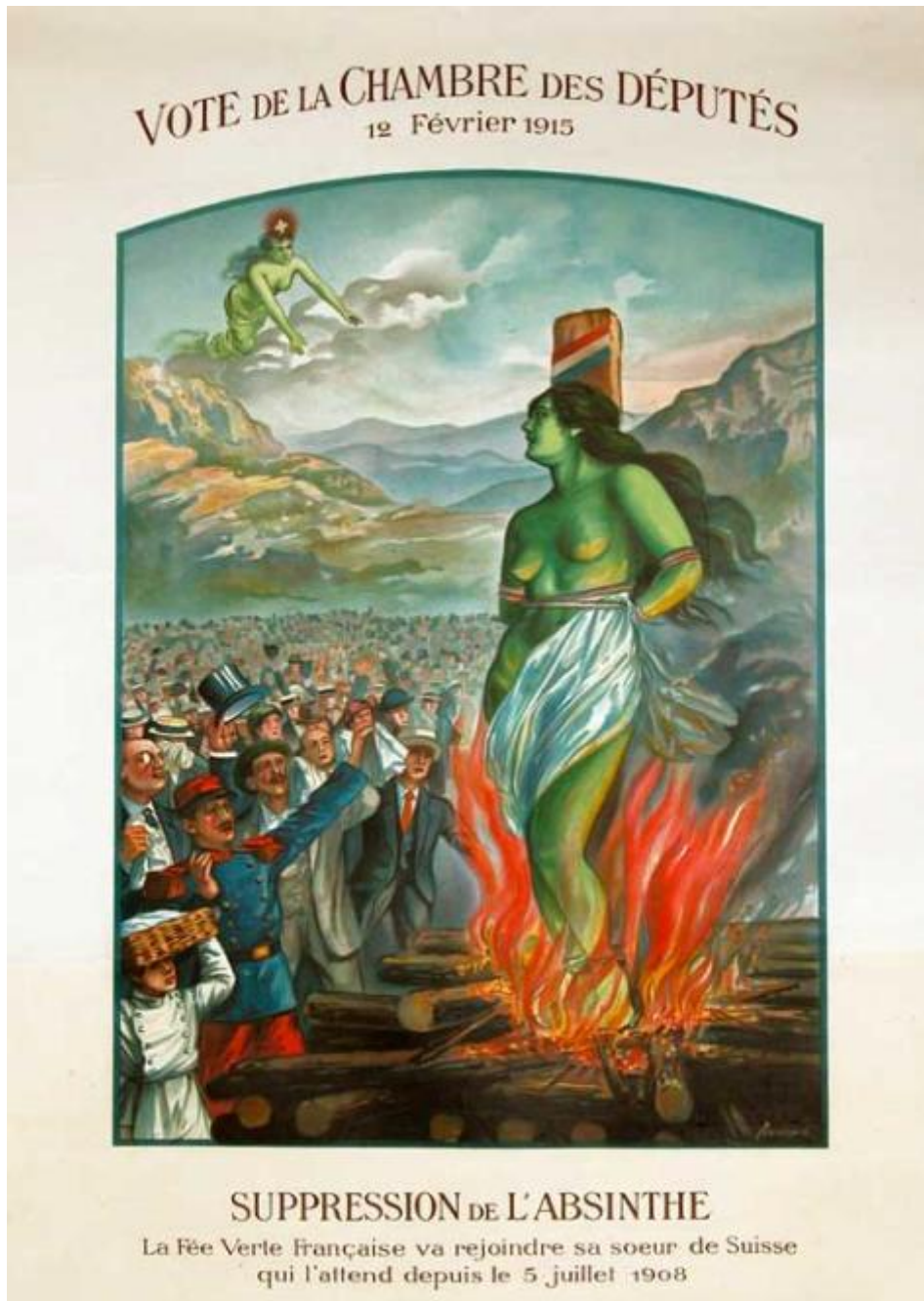
It is clear that absinthe as a cultural and intellectual symbol was and is powerful, both in providing a symbolic beverage which defined the bohemian intellectual community, as well as serving to unify those in the temperance movement. Likely disappointing to both friends and foes of *la fée verte*, however, absinthe's most potent danger is alcohol. Indeed absinthe, like most things, is toxic when consumed in excess, but in light of contemporary science, it is no cause for widespread hysteria. In spite of this evidence, however, the mythology of the green fairy will likely continue. People need myths. In the words of Aleister Crowley, "I am only sipping the second glass of that 'fascinating, but subtle poison, whose ravages eat men's heart and brains' that I have ever tasted in my life; and as I am not an American anxious for quick action, I am not surprised and disappointed that I do not drop dead upon the spot. But I can taste souls without the aid of absinthe; and besides, this is magic of absinthe! The spirit of the house has entered into it; it is an elixir, the masterpiece of an old alchemist, no common wine" (Crowley, 1918).



Absinthe is Death! by F. Monod, 1905  
Courtesy The Virtual Absinthe Museum - [www.oxygene.com](http://www.oxygene.com)



An absinthe postcard depicted the aperitif's supposed effects, date unknown.  
Courtesy The Virtual Absinthe Museum - [www.oxygene.com](http://www.oxygene.com)



An anti-prohibition lithograph depicted the ban of absinthe in France.  
Courtesy The Virtual Absinthe Museum - [www.oxygenee.com](http://www.oxygenee.com)

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