



## Research Paper

# From supplements to steroids: Substance use and the discourse of self-management in dominant bodybuilding culture

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## ABSTRACT

The vast array of methods promoted in a deeply commodified US bodybuilding and fitness culture includes the use of various substances. From nutritional supplements to anabolic steroids, the use of such substances has been shown to be primarily practiced not in the contained world of elite sport competition but amongst the general population. Ranging from gym-goers to clients of anti-ageing clinics, ordinary citizens have increasingly come to understand their use of such substances in terms of enhanced well-being, an indispensable technology for achieving higher standards of fitness, ability, and health. As a consequence, lobbying against State attempts to regulate such substances is put forth precisely as a defence of the right to self-govern one's own body, health, and life more generally. Focusing on the US context of the 1990s-2000s, the present paper looks at high-profile cases of regulation of such substances and the corresponding reactions inside bodybuilding culture. The latter I draw on in its capacity as an extreme yet symbolically crucial faction of the broader fitness culture that relentlessly emphasises individual responsibility and self-discipline. Ultimately, I will attempt to show how the very definition of health is not a static given but rather a core stake in these debates, as well as how the discourse of self-management is implicated in negotiating individual and group identities.

## 1. Introduction

As both the use of and research on image- and performance-enhancing substances have multiplied and expanded in various socio-cultural contexts, studies of specific geographical and temporal coordinates illuminate the constancies, changes, and interconnections in the field (see, for example, Andreasson & Henning, 2019; Gleaves, 2015; Hoberman, 2009; Monaghan, 2001; van de Ven et al., 2020). This specificity allows not only for analytical insights into a particular historical period and space but also, equally significantly, for putting current developments into perspective. The present paper explores notions of self-determination vis-à-vis substance use-related beliefs and practices in dominant bodybuilding culture. My investigation focuses on a particular cultural and temporal context, that of 1990s-2000s in the USA. In a wider context of neoliberalism and American traditions of self-governance, I look at the notion of self-management as a *right* as the other, more affirmative and productive in the Foucauldian sense, side of self-management as a *duty* of citizens (Dean, 1999). An attempt is made to show how this discourse is implicated in the articulation and

mobilization of bodybuilding as both a distinct, culturally integrated community of practice that cuts across national barriers (Johansson, 1998; Monaghan, 2002), as well as an integral part of a larger mainstream continuum.

More specifically, I examine the use of two types of substances that are/have been at times pharmacologically and legally distinct: nutritional supplements and anabolic steroids.<sup>1</sup> Such substances have been shown to be primarily used not in the contained world of elite sport competition, which often operates as a showcase for increased standards of productivity and performance, but amongst the general population (e.g. Cohen et al., 2007; Hoberman, 2005; Kantor et al., 2016). Ranging from gym-goers to clients of anti-ageing clinics, ordinary Americans in the period examined increasingly understand their use of such substances in terms of enhanced well-being, an indispensable technology for achieving a higher standard of fitness, ability, and health.

Methodologically, I have framed my exploration around responses to attempts at regulating the production and availability of such substances. I approach these instances as critical moments where the discourse of self-management as a right is more clearly articulated,

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<sup>1</sup> Typically analyzed in terms of gender construction, steroid use in particular is one of the most commented upon practices by researchers of bodybuilding culture in the period examined (Brady 2001; Dutton 1995; Fussell 1991; Klein 1993; Lowe 1998).

mobilized and comes to shape public debates, interests, and identities. Although the focus of the discussion is on a dominant US bodybuilding culture and industry, it needs to be noted that the latter has for the past six decades served as an influential model for other parts of the world. US-based institutions, companies, prominent figures, and specialized bodybuilding media have played a key role in shaping this globally exported model both at the level of dominant meanings and practical operations. In terms of media, I have chosen to examine those that have been the most authoritative and influential due to their seniority, magazine copies sales, structural affiliations with other key organizations in the field (such as bodybuilding companies and governing bodies), and international availability in print and electronic format. Based on the above criteria, I focused my investigation on *FLEX*, *Muscle & Fitness* and *Muscular Development* magazines from 1990 until 2008. Access to these materials was gained in the first instance through research visits to large collections of bodybuilding media in the USA, most notably the H.J. Lutzer Stark Center for Physical Culture and Sports at the University of Texas at Austin, and the *FLEX* magazine archive at the former Los Angeles headquarters of Weider Publications. These visits were facilitated by the owners/managers of the collections who provided valuable help with navigating the large volume of the primary material. Following a survey of content pages of the aforementioned magazines, I then examined those specific pieces related to the object of study. Internet searches were also conducted using a variety of key words corresponding to regulation attempts (e.g. “Anabolic Steroid Control Act of 1990”, “Anabolic Steroid Control Act of 2004”) as well as the internet presence (personal, company, and/or organisation websites) of prominent figures involved in the USA bodybuilding scene that had a pronounced stance on the topics investigated.

Through a sociological analysis of discourses appearing in the specialised media of the time, I aim to offer insights into a period characterised by intersecting developments that have come to shape the culture subsequently. These include the early onset of online media, the gradual mainstreaming of bodybuilding as a sport and lifestyle activity, the further global expansion of the bodybuilding industry, and the emergence of doping as a pronounced issue of concern not only in the confined world of elite sport but also in the broader public sphere.

## 2. Situating bodybuilding culture

Looking at its trajectory from the second half of the 19th century, when it first appeared, to the present day, bodybuilding falls under the broad category of alternative health/fitness/medicine cultures. I use the term ‘alternative’ here not in reference to a particular model or philosophy of bodybuilding that has remained constant. Quite on the contrary, bodybuilding culture has shifted tremendously in the course of time, developing in late-modernity in a direction almost antithetical to its initial one. An early model of the late 19th - early 20th century that celebrated the ‘natural’ body and ‘natural’ therapy has from the 1960s onwards gradually given place to one defined by the paradigm of performance and enhancement (Liakftos, 2017). Rather, the way I use the term ‘alternative’ is to designate an ongoing sense of juxtaposition, often in hostile terms, to a state-supported orthodox medical establishment, an antagonism that involves not only competing definitions of health but also classes of expertise.

This juxtaposition can be traced back to the second half of the 19th century in USA and Europe (Hau, 2003; Wedemeyer, 2000) when bodybuilding formed part of the larger physical culture movement. Many of its vocal proponents at this early stage advocated bodybuilding as a form of natural therapy against a drug-oriented medical orthodoxy. The latter they viewed as part of industrial civilization’s degeneration rather than a solution to it (Macfadden, 1912). Proper nutrition alongside body training and exposure to the sun was key in early bodybuilding discourses. The first nutritional supplements touted by renowned bodybuilding entrepreneurs also make their appearance in this period. From the 1950s onwards, the popularization of bodybuilding nutrition

supplements has spawned a geometrically-expanding industry: its products, entrepreneurs and consumers have collided with state agencies and medical authorities in dispute over supplement regulations in the late 1960s and early 1970s (Fair, 1999). My focus in the present paper is on the dominant organized bodybuilding culture emanating from the US in the period 1990s-2000s. Differentiated from other past or contemporary bodybuilding cultures through their adoption of a gospel of performance and enhancement by all means, the discourses and players I will be discussing have exercised a decisively global influence through the specialized media.

## 3. Supplements

Dietary or nutrition supplements, usually referred to simply as ‘supplements,’ is a vast array of manufactured substances with ‘natural’ (i.e. naturally occurring in the food chain) ingredients. In the period discussed, the background against which debates in the USA take place is a largely deregulated environment in the supplement industry. The Dietary Supplement Health and Education Act of 1994 has been the legal cornerstone in this respect by lifting the obligation of supplement companies to prove through scientific research that their products are safe and effective before they could be made available to the public. This shift was largely founded on a rhetoric that ultimately brought the issue down to freedom of choice and self-governance: by allegedly supporting the viability of small businesses that, unlike big companies, cannot afford to produce the costly scientific research, lobbyists and legislators simultaneously ensured more health-related choices for consumers based on ‘real’ free-market competition.<sup>2</sup>

From time to time, supplement use comes into the public spotlight as specific substances get scrutinized for their effects on health, giving rise to debates over the need to regulate more. In the bodybuilding industry, the defence of what are termed ‘supplement freedoms’ is typically based on the claim that such substances are clearly health-promoting. When the target or potential audience is that of the general public, a rhetorical device typically employed is the explicit differentiation between, on the one hand, supplements, natural and benign by definition, and, on the other hand, illegal and potentially dangerous hormones. The following excerpt from the *FLEX* magazine editorial titled ‘In Defense of Supplements: Why I Believe in Them’ is a case in point. It is written in light of the 2004 uproar regarding performance enhancement in sports that eventually led to the Anabolic Steroid Control Act of 2004 and the reclassification of pro-hormones, a previously over-the-counter popular bodybuilding nutrition supplement, in the same category as anabolic steroids. In his double capacity as executive editor of two internationally circulated bodybuilding magazines (*FLEX* and *Muscle&Fitness*, held from March 2004-July 2005) and Governor of California, Arnold Schwarzenegger indirectly addresses a general USA public, too:

Throughout my adult life, I have never missed an opportunity to preach the health benefits of a bodybuilding lifestyle [...] As an addition to a proper whole-food diet, supplements are essential for safeguarding against nutritional deficiencies and for augmenting the performance and results of hard training. Even for those outside athletics, dietary supplements are infinitely useful. For instance, older people can benefit from multivitamins, calcium and glucosamine supplementation. Expectant mothers need extra supplementation as they nurture new life; for children, vitamin boosters help bolster growth and good health. However, in the past few years, there have been attempts to limit the availability of many nutritional supplements. It is the nature of government to try to regulate – whether it is business, the workplace or when you should have lunch [...] All too often, dietary supplements have been lumped into the

<sup>2</sup> Suggestively, the title of the initial bill in 1992 was Health Freedom Act (Assael 2007: 107).

same category as harmful anabolic steroids [...] Our mission in the pages of *FLEX* and *Muscle&Fitness* must be to vigorously pursue the education process, helping to enlighten everyone as to the difference between the two and, ultimately, helping to protect every American's freedom of choice.

(*FLEX*, May 2005: 32–33)

The powerful stroke of free choice and the right to self-govern, with which the above editorial ends, is a common denominator in the discourses I explore in this paper. Indicative of the intense mobilization of such rhetoric is the following article featured in the August 2003 issue of *Muscular Development* magazine. The contributor, Rick Collins, is a NY lawyer, author, bodybuilding enthusiast, and General Counsel to the International Society of Sports Nutrition, presented as “a leading advocate for the health and fitness community, [...] a believer in preserving the rights of adult Americans to safe dietary supplements.”<sup>3</sup> Here, he speaks on behalf of the United Supplement Freedom Association, Inc. (USFA), an organisation described as a “not-for-profit coalition dedicated to the preservation of nutritional freedoms for American adults.” Titled “The USFA: Defending Your Supplements,” the piece amounts to a public call to oppose two bills [(H.R.) 207 and S. 722] aiming at regulating certain supplements:

What started as investigative interest into the safety of ephedra after widespread negative publicity has mushroomed into an all-out attack on all supplements, including prohormones. Those urging prohibition of prohormone products have most recently pointed to general safety concerns, adolescent usage, and real anabolic steroids sold via “legal loopholes.” Rather than specifically addressing these issues, however, the remedies being proposed are so overly broad as to devastate the rights of adult Americans to optimize their health through popular dietary supplements [...]

[These bills] would permit the arrest and criminal prosecution of potentially millions of Americans as drug criminals just for possessing these supplements without a prescription. Those caught with these products could even be subject to federal asset forfeiture laws, authorizing the government to seize and retain private property. This bill could allow not only sports supplement products but popular anti-aging products such as DHEA, 7-keto DHEA and pregnenolone to be shoved into a classification that was intended to be reserved for drugs with dangerous abuse potential, not for health supplements [...].

The USFA has been working hard to increase public awareness of the potentially dire consequences of S. 722 and H.R. 207. We have been educating legislators who believe in nutritional supplements on the adverse impact these bills would have. We have been coordinating with other groups, including the National Nutritional Foods Association (NNFA) and Weider Publications. A grassroots movement opposing the bills is growing [...]

(*Muscular Development*, August 2003: 300–302)

In this particular USFA campaign, the community of practice that is bodybuilding is clearly mobilized as part of a much larger continuum. Articles similar in content and tone to the one above appeared planted during the same period in anti-ageing and natural/ alternative medicine media, too. In its March 2003 issue, *Life Extension* magazine features a similar article. Under the photo of a man being forcefully arrested by federal agents, a sense of civil society is produced around health-related concerns: “Wake up, America! [...] We must act immediately to let our voice be heard, or face the beginning of the end of our supplement freedoms!” This call to action is complete with a draft letter to

congressional representatives at the end of the article. Thus, although late-modern, dominant bodybuilding culture and industry favor a performance-oriented model that may seem foreign to the holistic health profile typically associated with alternative medicine, in such contexts the rhetoric of autonomy and the power to decide for oneself provides a common ground for an alliance against common enemies. Through a liberal narrative that at times gets articulated through a conspiracy lens, the orthodox medical establishment, federal government and its agencies of control and enforcement, as well as big pharmaceutical corporations are imagined to be working on a national and even global level against ordinary citizens’ ‘god-given rights.’<sup>4</sup>

#### 4. Anabolic steroids

Anabolic steroids, usually referred to as ‘steroids,’ are synthetic versions of testosterone, a hormone naturally occurring in the human body (Bond et al., 2022). Introduced in the world of elite sport in the 1960s and subsequently popularized amongst much larger populations, steroids are a complex case given that they have been intensely debated, demonized as well as widely used. In the USA, the public uproar reached its first climax in the 1990 with the Anabolic Steroid Control Act of 1990 whereby Congress decided to make anabolic steroid use for non-medical reasons illegal by adding them to Schedule III category of the Controlled Substances Act (alongside amphetamines, methamphetamines, opium, and morphine).<sup>5</sup> Since the late 1990s, steroids have enjoyed wide visibility and their usage has been portrayed as a public health issue, defined by many as part of USA’s war on drugs.

The defense of steroid use against state intervention and criminalization by people involved in bodybuilding is shaped around the right to self-management. In some cases, this is articulated in terms of a notion of self-realization according to the criteria of the (sub)culture of ‘chemical’ bodybuilding. The steroids controversy allows for the production of a distinct and distinguished ‘inside’ in opposition to a hostile ‘outside.’ Attacking what are portrayed as stigmatizing stereotypes of it as irrational, pathological, and potentially harmful to self and others, steroid use by bodybuilders is presented as educated and scientific, a responsible and informed risk-taking (Monaghan, 2001). In the following instance, John Romano in his regular column in *Muscular Development* magazine writes of the ‘Roid Rage’ segment of HBO channel’s ‘Real Sports’ show.<sup>6</sup> In the segment of this TV show Romano appears as senior editor of this well-known bodybuilding magazine, speaking of his personal steroid use, and is filmed training as well as injecting steroids in Mexico where the substances are legal. Addressing an audience of insiders, he celebrates the show as a positive exception in the world of mainstream media:

<sup>4</sup> The 2005 documentary-type film *We Become Silent* is such an attempt, presenting a consumer movement for health-related freedom of choice. The US Food and Drug Administration (FDA) are portrayed as tyrannical in their attempts at regulation and enforcement. The film features a well-known commercial with Mel Gibson defending the use of supplements, ending with a call to viewers: “Protect your right to use vitamins and other supplements. Call congress now.” In a similar instance of pro-supplement activism, actor James Coburn had declared: “It’s you, it’s me, it’s us against the FDA” (Assael 2007: 127).

<sup>5</sup> It is interesting to note that this decision was taken despite the fact that expert bodies participating in the congressional hearings, such as the Drug Enforcement Administration (DEA), the Food and Drug Administration (FDA), the National Institute on Drug Abuse (NIDA) and the American Medical Association (AMA) opposed it on grounds of lack of scientific evidence that anabolic steroids cause physical or psychological dependence.) A few months earlier, the Steroid Trafficking Act of 1990 had initially added anabolic steroids to Schedule 2 of the Controlled Substances Act.

<sup>6</sup> First aired on June 21, 2005.

<sup>3</sup> <https://www.sportsnutritionociety.org/BoardBio02.php?IDdirector=43>; ac. 24.11.2024.

This time, all you zealots, professional alarmists, lobbyists and other benefactors of a grave abrogation of the truth that has annihilated the freedom of healthy adult males to exercise sovereignty over our own bodies – know this: your mask has finally been pulled. The science is out of the bag and as I write this America is digesting a strong dose of the truth. And in the process, Americans are realising that the supposed honourable process by which this nation is protected and informed has let them down.

(*Muscular Development*, September 2005: 79)

There is another way that hormone use is framed by people involved in the bodybuilding industry, one that has more recently gained visibility. This consists in presenting it as beneficial not only according to the subculture's own criteria of the 'good' body, but as straightforwardly health-promoting. The latter is portrayed in terms of combating disease (e.g. steroid use employed against muscle-wasting) or enhancing overall well-being, particularly in the way this is understood in lifestyle and anti-ageing medicine (Dunn et al., 2021). In this light, the community of practice that is bodybuilding gets fully aligned with developments in mainstream culture. The following is an excerpt from Dave Palumbo's talk at the Steroid Use, Abuse and Policy Symposium organized at Hofstra University Law School (NY) on October 2010. In a USA climate of intense public debates over performance enhancement in sports and law-enforcement operations cracking down on production and distribution of relevant drugs, Palumbo speaks in his capacity as former elite-level bodybuilder, fitness author, owner of a sport nutrition supplement company, and co-founder of a popular bodybuilding website. Amongst his various arguments for the decriminalization of steroids and other hormones, he also alludes to their health-enhancing qualities. Listing what in the anti-ageing industry are habitually highlighted as benefits of hormone use, he argues:

Now that people are catching on that steroids and growth hormone can help you live healthier and more productive lives, they can improve the subtleness of your skin, help reduce body-fat and increase lean muscle mass, they can improve sex drive and give you more energy...you know that more people will want to start using them. Making them illegal is just not going to work.<sup>7</sup>

In instances such as this, rather than a defensive stance trying to explain bodybuilders' use of hormones as controlled and rational against mainstream media/law/medical misconceptions, a more affirmative rhetoric is pursued. Here, hormone use is endorsed as compatible with a notion of self-management that is not limited to rational risk-taking and self-control but extends to a proactive stance, at the forefront of fitness optimization. The narratives used often implicitly conflate different types of anabolic steroid use (e.g. anti-ageing hormone replacement therapy and performance-enhancing protocols), presenting these more as a continuum. Bodybuilding experts appear to be ideologically and commercially well-placed in the field of lifestyle medicine that is rapidly expanding in the USA in the period examined. Dave Palumbo is a telling example: his bodybuilding and fitness multi-media website rxmuscle.com is sponsored, among others, by Envision Medical, a Florida-based clinic specializing in "hormone replacement, weight loss, food allergy testing, erectile dysfunction as well as personal wellness."<sup>8</sup> Operating under an 'Optimise Your Hormones' banner at bodybuilding and fitness industry expositions, the company promotes a health model based on notions of fitness optimization and the empowered patient (Hoberman, 2005).

## 5. Discussion

Nutrition supplements and anabolic steroids, and by extension the debates and antagonisms developed around them, bear certain distinct differences. While the first one has been established as a legitimate, long-operating, billion-dollar industry with a strong lobbying machinery and political support, the latter do not lend themselves in the same way to such organized interests, partly because of their clandestine cultural status and partly due to business considerations regarding patenting. Although systems of delivery can and are sometimes patented, the actual drugs cannot, rendering thus the prospects of investment in their production and profit-making slim in comparison to those of the supplement industry. Having recognized this, my discussion aims at bringing out the important similarities that exist in the way these categories of substances are produced in discourse. Placed in the larger context of health and/in American culture, the voices supporting the use of such substances have at their core a particular notion of the self-managing subject. As Galvin (2002) points out, the empowered, health-conscious subject of neoliberal formations is not an abstraction but, rather, an entity that is signified and operated in a concrete network of social relations. In this case, the latter include the dynamics of the free-market in the bodybuilding and fitness industry, the (re)formation of individual and group identities, and the negotiation of power and authority amongst competing players. Rather than a form of public health protection, regulation here is seen as a paternalistic restriction of bodily sovereignty even in the case of individual choices that may burden collective healthcare system (e.g. vital internal organ issues associated with certain uses of anabolic steroids).

Knowledge and authority of expertise are one of the central stakes in this environment: as mentioned previously, a sense of bodybuilding as a community of health-conscious, self-managing individuals is, to a great extent, shaped through an opposition not only to a 'hostile,' 'misinformed' general public but also to an 'ignorant' medical establishment. The discourse of self-management that places at its center the informed, educated, empowered individual, raises in significant ways the issue of expert knowledge: where and how is one to access valid health-related knowledge? How is such knowledge to be produced and evaluated? Who is ultimately responsible for choosing what knowledges and practices to trust? In practice, it mandates a multiplicity of knowledges and applied approaches. For Monaghan, 'chemical' bodybuilding is precisely "symptomatic of a more general questioning of authority, expertise and professionalism in late modernity" (Monaghan, 2001: 14). As I have shown afore, those recognized as authoritative voices inside the world of bodybuilding transpire as experts and entrepreneurs of various kinds, producing and dealing in products, services and cultural capital in a free-market environment. For this reason, their omissions or rebuttals of scientific evidence on potential health risks associated with such substance use can be attributed not only to their ideological positions and subcultural affiliations but also to their financial interests.

Part of my attempt has been to demonstrate how bodybuilding operates and can be conceptualized both as an integrated subcultural space as well as a symbolically central part of a much larger continuum in dominant US culture. The anti-regulatory stance on the issue of substance use and the role of government emphasizes powerful notions of freedom, sovereignty over one's own body and one's identity. In this light, bodybuilding emerges as a community of practice made up of self-determining individuals who give the law to themselves (Eagleton, 1990). In effect, the 'chemical' stance appears to be voicing a whole culture where "drug use serves to strengthen the identity of the individual into the group and, hence, the level of subcultural group integration" (Monaghan, 2001: 4).

At the same time, the take-off of lifestyle medicine, with the anti-ageing industry being one of its main driving forces, greatly allows for a framing of bodybuilding methods, including hormone 'therapy,' as health-enhancing and increasingly normalized and common sense. As Hoberman (2005) notes, the expansion of lifestyle medicine and

<sup>7</sup> [http://www.livestream.com/hofstralaw/video?clipId=flv\\_d86e80d3-37d4-427a-912f-0eb68015501a](http://www.livestream.com/hofstralaw/video?clipId=flv_d86e80d3-37d4-427a-912f-0eb68015501a); ac. 05.03.2023.

<sup>8</sup> <http://www.envizionmedical.com/>; ac. 08.01.2024.



industry based on a model of the empowered subject/consumer/patient allows for a previously unimaginable flexibility of the very meaning of health. Instead of being a given, an objective common denominator in the debates I am exploring in this paper, the meaning of health can now be stretched to fit the individual's subjective vision of human flourishing (ibid: 18–19). Thus, a logic of ongoing maximization and optimization that has shaped bodybuilding culture for decades now in its search for higher standards of muscularity and performance progressively comes to encompass the 'healthy' or 'fit' body. Having moved from healing to enhancement, health comes unto an open-ended paradigm of evolution towards 'bigger and better' things. In the process, dominant bodybuilding culture gains cultural legitimacy and appears vindicated in its beliefs and practices: not deviant, marginal and/or pathological but at the forefront of a broader American culture of enhancement and better living through chemistry.

Although no deterministic relation can be established between, on the one hand, notions of autonomy and empowerment, and, on the other hand, any specific political paradigm, one cannot but notice the central role the former notions occupy in a US context dominated by neoliberal approaches to health, the economy, and subjectivity. A host of interrelated terms constitute a staple in dominant (predominantly Republican) political rhetoric, directly alluding to revered American traditions of self-autonomy, self-education, individual responsibility and risk assessment, and right to choice. It is in this context that I have tried to trace self-management as a *right* as the other, more affirmative side of self-management as a *duty* of citizens. As Rose (1992) suggests, in a culture defined by the values and workings of entrepreneurship and the free market, individuals are expected to *want* to take care of themselves through access to bodies of expert knowledge produced in a 'natural' environment of competition. Thus, attempts at regulation and the reactions they engender serve as focal points where this discourse of self-management as a right is more clearly articulated, mobilized and comes to shape public debates, communities of identity and interests.

## 6. Conclusion

This paper has examined notions of sovereignty and substance use-related beliefs and practices in dominant bodybuilding culture. I have argued that the discourse of self-management as a right is central in the articulation and mobilization of bodybuilding as a distinct community of practice and identity forming across national barriers as well as an integral part of a larger mainstream continuum. The analysis has zeroed in on two types of substances, i.e. nutritional supplements and anabolic steroids. These have diachronically enjoyed a highly visible place in bodybuilding culture as well as having been used by ordinary Americans wishing to optimize their fitness and bodily abilities. The sociological lens I have offered aims to elucidate how different substances can become pivotal in shaping and negotiating individual and group identities as well as shifting ideas of health and well-being. From a methodological viewpoint, responses to attempts at regulating the production and availability of substances transpire as critical moments where the discourse of self-management as a right is more clearly articulated and mobilized.

Aligned with a body of research that situates sport and lifestyle substance use historically and culturally, this paper has focused on a dominant, US-based bodybuilding culture and industry of the 1990s–2000s. Bodybuilding culture has been neither homogenous nor unchanging through its trajectory that spans almost one and a half century, and alternatives to this dominant paradigm have existed in the past and now (Liokaftos, 2017, 2018). Yet, through its institutions, key figures, modus operandi and specialized media, this dominant culture has, for the past sixty years or so, gradually come to serve as a model for other parts of the world. During the period examined, the US functions as the matrix of both dominant bodybuilding culture and a wider neoliberal paradigm that has come to exert influence on a global scale. The attempts at regulation and the responses provoked are indicative of this

key juncture marked by important developments. The latter include novel trends in substance use and the ensuing hopes and anxieties around changing visions of the human body, a new cultural resonance for bodybuilding and the emergence of new commercial interests, as well as the gradual onset of online media that would pave the way for subsequent rapid processes of digitalization in doping and culture (Andreasson & Henning 2023).

The examination of the discourses of self-management as a right can be seen as part of a larger research direction that seeks to identify and understand the positively-inflected attitudes to such substance use. Recent contributions in this area include, for example, works on the pleasures of doping (Gibbs, 2023; Mulrooney et al., 2019). In addition to that, the discourses I have traced here have served as a defence vis-à-vis the stigma diachronically attached to such substance use. Apart from the subcultural dimensions touched upon in my analysis and which speak to a communal search for legitimacy, this stigma has been shown to persist to this day and negatively influence individual users' health-related beliefs and practices (Cox et al. 2024). Identifying and trying to meaningfully engage with the ideas at the core of such discourses can contribute not only to a further theoretical elaboration of the social phenomena in question but also to practical interventions that target substance users through an appreciation of their particular attitudes and needs (ibid.; Iversen et al. 2016).

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## CRediT authorship contribution statement

Dimitrios Liokaftos: Conceptualization.

## Declaration of competing interest

No conflict of interest.

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