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VALLET, Guillaume Antoine

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## The gendered economics of bodybuilding

#### Guillaume Vallet <sup>Da,b,c</sup>

<sup>a</sup>Department of Economics-CREG, University of Grenoble Alpes, Grenoble, France; <sup>b</sup>Institute of Sociological Research, Geneva, Switzerland; <sup>c</sup>CADIS-EHESS, Paris, France

#### ABSTRACT

This article sheds light on the gendered economics of bodybuilding, a topic that, to my knowledge, has not previously been studied. First displaying its history, it examines how the economy of such a sport was born, focusing on the principles and values of capitalism and then creating the 'bodybuilding's industry'. In particular, the article stresses the gendered dimension of such an industry relying on 'hegemonic masculinity', especially through the relevant media, which are at the core of this gendered framework. I use a qualitative methodology to understand the subject, analyzing the French magazines related to bodybuilding, which embodies the whole functioning of such an industry. **ARTICLE HISTORY** 

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#### **KEYWORDS**

Bodybuilding; industry; gender; hegemonic masculinity; qualitative methodology

#### Introduction

The lively debates about Qatar's World Cup 2022 obtaining business from powerful sportswear firms illustrate the symbolic power of money in the sporting world. Generally, even though it is always difficult to measure its size, one can estimate that the business of sport through the goods and services trade is worth approximately 550–600 billion dollars (Andreff 2011). It is clear that 'big' sports are concerned with this process, but there is another 'forgotten' sport that embodies such a dimension, namely bodybuilding. Although its stars are not internationally well known, such a sport is extremely popular around the world and the International Federation of Bodybuilding (IFBB) is the sixth federation of sport in the world, taking into account the number of affiliated members (Flex 2013). Such a popular sport relies on a strong industry set up over the course of the twentieth century, like other major sports, symbolizing that it is the vehicle of capitalist principles (Szymanski 2010).

This article therefore seeks to provide a new perspective on an industry as a whole that has not yet been investigated. It is important to analyze its framework using a theoretical background and empirical work borrowing from the gender background. I shall demonstrate that as the 'bodybuilding's industry' strongly relies on masculine ideals having an economic value for the industry, the concept of 'hegemonic masculinity' (Carrigan *et al.* 1985) is key to understand its functioning.

'Hegemonic masculinity' is an ideal relying on four main pillars:

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- 1) Distrust for women.
- 2) The fear of losing face.
- 3) The enhancement of strength, boldness and aggressiveness (thus the competition among men) to build masculine identity.
- 4) The desire to be the leader, which involves the appropriation of women and submission of other men.

Indeed, 'hegemonic masculinity' works through the following simplistic but efficient message regarding the use of the body: the 'real' male is a heterosexual man who is strong, whose strength can be seen through the size of his muscles, and the size of his muscles is the best way for him to appear stronger than other men, as well as to become more attractive to women (Steere *et al.* 2006). It is worth noting that 'hegemonic masculinity' is neither a transhistorical nor a reified model. Moreover, it is consistent with multiple masculinities, demonstrating the extent to which masculinity is subject to change (Kimmel 2013).

Nevertheless, it represents the core of masculine ideal, namely 'the currently most honored way of being a man, it required all other men to position themselves in relation to it, and it ideologically legitimated the global subordination of women to men' (Connell and Messerschmidt 2005, p. 832). The industry of bodybuilding exploits 'hegemonic masculinity' in a functionalist way in order to make money, stressing the key role of building an 'augmented body' to be a man.

Hence I am building, in particular, on qualitative data imported from French magazines in an attempt to understand and explain how such an industry was born, and the way its major actors make it increasingly stronger over time from an economic point of view, thanks to the tie between bodybuilding and 'hegemonic masculinity'. Following Messner (1992), I consider magazines to be the most representative type of media for bodybuilding, playing a significant role in spreading the image of bodybuilding that lies at the heart of the industry.

Such a focus on magazines will allow us to understand why and how 'bodybuilding's industry' is gendered and works through gender. Therefore, I tackle the following issue: to what extent is the industry of bodybuilding strongly tied to gender, and especially to 'hegemonic masculinity', as illustrated by the media that have mostly participated in its development?

The article is organized as follows: in the first section, I briefly describe bodybuilding as a sport in relation to its history. Second, I examine the ties between bodybuilding and capitalism, given that such a sport has grown up within its framework. This allows me to model 'bodybuilding's industry' in the third section. The fourth section deduces from this to what extent such an industry is gendered and can only exist through gender, particularity through the 'hegemonic masculinity' framework. The fifth section deals with an empirical research from the magazines of bodybuilding, indicating to what extent they participate in the growth of the industry. The sixth section concludes.

#### 1. A concise history of bodybuilding

Bodybuilding can be defined as a sport promoting three dimensions that must be reached together: maximal muscle mass level, minimal fat and water levels, as well as the symmetry

and equilibrium of the various muscles (Choi *et al.* 2002). For those who compete, there is also the presentation of the body on the scene. Hence, there is an aesthetically oriented pursuit of the practice (Mosley 2009). Such dimensions clearly indicate to what extent bodybuilding is always supposed to be at the extreme of the self: the main principle that a bodybuilder must implement is always to push back his/her limits, meaning that s/he always seeks to improve his/her level.

However, it is worth noting that bodybuilding viewed as a sport is not self-evident for everyone (Klein 1993). Indeed, the absence of a 'real' objective with respect to the development of muscle and the assessment of the performance only through judges' subjective decisions seem to be suspicious: '*Since it uses rigorous training, it is a sport; but as competition, it becomes art*' (Klein 1993, p. 43). Moreover, according to Klein, the main reason explaining such an ambiguous status regarding bodybuilding as a sport comes from the duality it embodies: bodybuilders can be admired for what they look, and not for what they can do with their muscles. To put it differently, muscles seem to have no clear 'function' in such a sport.

Be that as it may, I consider bodybuilding as a sport, and then its role in the development of modern sports that were born at the end of the nineteenth century (Berry 2010). At this time, the socio-economic context created new conditions for bodybuilding and other modern sports to grow. Among other reasons, industrialization and anarchic urbanization created the fear of both large-scale diseases as well as class warfare. Sports were then viewed as an optimal way to spread hygiene and to exert social control over one's body – even 'docile bodies' for some authors (Foucault 1986) – preventing social conflicts from arising through self-control enhancement (Dunning and Elias 1986).

Of course, at that time, one cannot talk about bodybuilding as it has been defined previously: rather, there are some physical activities inherited from the previous centuries in which strong men simply lift weights in a public show or at the gym, where several activities take place. What matters is less the shape than the function of the body, with some sportsmen resembling 'beer drinkers' (Schwarzenegger 1998).

However, things started to change at the same time, thanks to several men: Eugen Sandow (1867–1925), Bernarr Macfadden (1868–1955) and Charles Atlas (1893–1972), for example. Even if they too were able to lift heavy weights, they placed greater emphasis on bodily display than on performance (Monhagan 2001). Furthermore, they invented several new exercises to train that had never existed before; they found themselves in the tradition of German gymnastics at the end of the nineteenth century, whose main goal was to improve and control the body. In particular, Macfadden and Atlas played a significant role in developing competitions in which champions could exhibit their bodies in public. Both shows with bodies' exhibition and these new exercises as well as their impact on the enhancement of bodies were really attractive for people, especially for the low-income and middle classes in the United States (Chapman 1994, Luciano 2001).

The first competition organized by Macfadden in 1901 at Madison Square Garden, electing 'The most developed man in the world', is relevant to the history of bodybuilding because, focusing on 'perfect physiques', different kinds of physique can be seen. In the same way, even with the creation of Mr America in 1939, we had to wait until 1945 to witness champions that simply wanted to exhibit low muscle fat, regardless of what they were able to lift (Schwarzenegger 1998).

The conditions for the development of bodybuilding had been launched. From an economic point of view, the latter was fostered by the parallel development of the movie industry, in particular in Hollywood. Indeed, several bodybuilders have been used to acting in popular movies, such as Steve Reeves in *Hercules* (Holmlund 2002). Such movies have been extremely important for bodybuilding because they have popularized a physical norm that is attractive to people. Hence, people have turned to their bodies, believing that they can be a good indicator of health, as will be outlined below, along with anchorage to the Californian way of life. This partly explains why bodybuilding has been increasingly popular since 1945 in the United States (Holmlund 2002).

Furthermore, since then several federations have been organizing competitions. Initially, bodybuilding exhibitions depended on large sports federations, such as the Amateur Athletic Union (AUU), formed in 1888. However, its framework didn't fit the real competitions of bodybuilding. For this reason, Joe and Ben Weider, two important characters in the history of such a sport as I shall explain, decided to create their own federation in 1946, the aforementioned IFBB, after a conflict in an AUU contest in Montreal the same year. Other federations were born in subsequent years, such as the National Amateur Bodybuilders Association (NABBA), founded in 1950, or the World Amateur Bodybuilding Association (WABBA), founded in 1975.

Nevertheless, the sport found its consecration with the creation of several major competitions such as Mr Universe and, of course, the main one, Mr Olympia in 1965, which fall under the authority of the IFBB. The latter has been crucial for the growth of bodybuilding, because it has permitted bodybuilding to rely on a professional dimension: such a competition only involves the best worldwide bodybuilders, who can earn money thanks to sport alone. I will focus on this last point, but it is important to note that the development of professionalism in this way has broadened the audience of bodybuilding. If winners such as Schwarzenegger in the 1970s are famous, others that come thereafter (Ronnie Coleman, Phil Heath, etc.) embody one important aspect through their bodies that I have cited previously: bodybuilding is a sport with no limits, because bodybuilders can always transgress the borders of their body if they wish. From this point of view, such a sport is clearly also anchored in, as well as being a vehicle of, the principles of Western capitalist societies, as I shall explain next.

#### 2. Bodybuilding and capitalism

Bodybuilding, arguably, deals with capitalist principles. Specifically, one can understand it through the 'production sphere', as well as the 'circulation sphere' that it embodies. As far as the first is concerned, it means that, for a bodybuilder, bodybuilding copes with the way of developing the body, which refers to the technical factors relevant during workouts, as well as nutrition, the use of drugs, and so on. The second dimension concerns consumption, which is the way the body is used through interactions for the presentation of the self (Turner 1996). As we are living in a consumer society, where the presentation of the self has experienced increasing importance, the body can be considered the perfect and possibly best object of consumption (Baudrillard 1998).

It is certain that the two sides – production and consumption – are linked and one can then observe the development of practices of body transformations that accompany the contemporary philosophy in which everything seems possible for everybody, with no limits whatsoever (Blake 1996). There is both a freedom to produce the body and a responsibility to do this (Green 1997). In this period of capitalism called 'second modernity' (Monhagan 2001), there is an individual focus on the body and its ownership, especially because visible health enjoys a high status (Jutel and Bluetow 2007): the body embodies self-control, the ability to be fit and to appear productive (Davis and Scott-Robertson 2000). Henceforth, taking care of one's health is the right way to improve one's productivity (Becker 1964) or to have better jobs (Zebrowitz 1997).

From this point of view, sports such as bodybuilding are presented as 'the one best way' to appear fit, healthy and be sure of the self as well as gaining authority (Hutson 2013). Hence, this indicates that the production of such a body leads to a hierarchy between the people achieving such a 'rational body' and others with 'irrational bodies', the latter being associated with mismanagement of the self (Green 1997). To sum up, this implies that the bodybuilder must apply the principles of entrepreneurship to his/her body in order to show off its results.

Such a productive attitude is particularly linked to three main elements that have been growing since the 1980s in the capitalist system:

- Consumption has become central to defining one's status (Shilling 1993). This is linked to the rise of a new kind of capitalism: capitalism working through leisure (Andreff 2008) entailing a regulation of desires (Turner 1996).
- The Schumpeterian entrepreneur becomes the model, even the new 'hero' of capitalism (True 2000): there are economic and social incentives to be innovative and take risks through the body to reach the ultimate performance. This process fosters the development of individualism and the control of the self mentioned above.
- Sportspeople and their performances are the benchmark. Like them, you must use your body as a tool in the sporting activity to improve yourself. This means that the body is not separate but belongs entirely to the capitalist world (Szymanski 2010): it is necessary to apply to the self the principles of instrumental rationality, meaning new sources of knowledge and power but also economic needs (Turner 1996). For this reason there is a particularity of the current phase of care of the body in capitalism, based on both ascetism and rationality in order to produce it, and hedonism as well as eudemonism through consumption (Turner 1996).

Bodybuilding goes hand-in-hand with this, because it celebrates the 'production sphere':

• *Liberty*: in a socio-historic context, whereby 'where there is a will there is a way', the body is seen as a personal resource that someone can transform into capital. The body is the private means of production; even such a property is particular: the transformation into capital is partial because its accumulation is individualistic and ephemeral. Partly through genetics, it is impossible to transmit directly such bodily capital, meaning that it is necessary to change it into economic capital, although the 'exchange rate' is uncertain (Shilling 1993). What is certain is that such a capital deals with accumulation, another great feature of capitalism (Neal and Williamson 2015). In bodybuilding, muscular process development, linked to the huge quantities of absorbed nutrients, is illustrative of this.

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- *Equality in rights and conditions*: people using their liberty to develop their bodies are at the same level and take advantage of the same conditions to reach their aim.
- *Merit*: success depends on an individual's performance and efforts. Investment in the body is a new deal where social justice and meritocracy exist on the condition of strong work. The latter benefits from a very high status: it participates in an individualistic way to transforming the body as well as the self. Specifically, as the work is the sacred medium between the sensible world and the self, the pain it induces is both accepted and valorized. The explicit philosophy of bodybuilding's maxim, 'no pain, no gain', embodies this. The development of the body in bodybuilding as a result of work clearly relies on a standardized process through exercises or gym organizations, for instance. At large, such principles are warranties for the existence of labor and control of the self that are crucial for the existence of capitalism (Shilling 1993).
- *The inequality of the situations*: merit transforms equality into rights and conditions in *de facto* inequalities through the differences in individual performance. Hence, such disparities become justifiable, both because they appear fair and because they are temporary. Indeed, as there is the will to produce a body as rationally as possible, the limits can be pushed further, in addition to the comparison between bodies in the interaction process driving everybody to want more and more.
- *The signs market*: in capitalism, the market has become the main institution for distribution of the economic and social position according to individual performance. With this topic, it is such a market of symbols that gathers the production and circulation spheres through the body that is produced, the 'price' of which depends on the social value ascribed to it. The nature of this market can be different: it can be the labor market (someone sells his/her labor force through his/her bodily capital for economic activities), or the market from which to choose a partner (the 'market of signs').

Diagram 1 illustrates how such principles work together. The performing body desired at time T is part of the principles (liberty, equality, merit) leading to action (private appropriation of the body, definition of a 'fair' project, work). Performance follows, with an expected valuation either on the labor market or on the 'market of signs'. Although

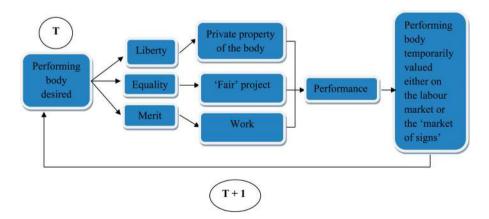


Diagram 1. Performing body and capitalist principles. Source: The author.

each bodybuilder has its own 'system of preference' (Monhagan 2001) according to his/her degree of commitment, the intrinsic collective logic of this sport is that this performance is considered provisional and therefore must be overcome in T + 1:

To conclude, in this section I have tried to shed light on the links between bodybuilding and the principles of capitalism. It is worth noting that bodybuilding, like other modern sports, is tied to capitalism in two ways (Szymanski 2010): on the one hand, it goes hand-in-hand with its development, and on the other hand, its structures and forms co-evolved with the institutions of modern capitalism. This said, even though I have put aside the specific role of money that is nevertheless central in the development of capitalism, I have shown that such a sport is both a reflection and a vehicle of such an economic system in different ways. Keeping this in mind, time is ripe to go further to comprehend more concretely to what extent bodybuilding fits into such an industry.

#### 3. Worth its weight in gold: The 'bodybuilding's industry'

The 'bodybuilding's industry', like all industries, needs to ensure its growth, coupling mass consumption with mass production. To reach this aim, it has had to increase its public, meaning that the supply side strongly influences the demand side in such a field. Like other sports, in order to create new mass needs, it must work not on uncertainty but on predictability (Andreff 2008).

Specifically, I deduce that the 'bodybuilding's industry' relies on a 'magic triangle' that has three complementary pillars:

1) The show

As with other sports, bodybuilding needs to be attractive to its fans because it creates dreams and then economic desires. This means that bodybuilding has had to reinforce its attractiveness through professionalization, which allows leading figures of this sport – the 'champions' – to earn a living thanks to their sport. Hence, they can exhibit huge and extraordinary physiques in different competitions, especially in the most famous one, Mr Olympia.

Mr Olympia has therefore had to gain visibility and foster its spectacular dimension: after the era of international shows outside the USA in the 1980s, at the beginning of the twenty-first century Joe Weider previously mentioned decided to locate the competition in a luxurious hotel in Las Vegas (the Mandalay Bay, which belonged to Joe Weider<sup>1</sup>). What is interesting to note with this model is that the costs are limited thanks to the scale economies, as well as the lack of high investment in the competition, while income is high as a result of ticket sales, sponsorship, and so on. In this case the cost/ advantage balance of such competitions is extremely positive, even with a relatively weak audience during production of the show.

More broadly, the IFBB plays a significant role in this process because it has global control over international competitions and federations. It is the 'head' of an internationally ramified system and belongs to the club of sports' institutions that are more global even than the United Nations (Westerbeek and Smith 2003). In spite of the differences, I can say that the latter works like a closed league system. Here the closed league system is a cartel where there are few main organizations and few selected competitors. Such a system has a strong advantage: the league maximizes collective revenues through monopolizing supply (Andreff 2008) and because it generates a quantitative rationing process (Fort 2003).

First, as it is difficult to broaden the audience of the sport significantly, and thus allowing competitors to earn a living from bodybuilding, it is better to develop the number of competitions in a federation than the number of federations. Then, the cost of entrance being too high, there are *de facto* barriers. Furthermore, the competitions must be sufficiently numerous to foster the competition that creates uncertainty. For instance, the IFBB organizes 21 internationalized contests throughout the year for different competitors (according to weight or gender), the foremost being Mr Olympia as highlighted previously.

I can go further by applying El Hodiri and Quirk's model to the professional sports league (El Hodiri and Quirk 1971). They have shown that the equalization of sportive forces doesn't go hand-in-hand with the maximization of profit. In bodybuilding, the limited number of federations, with the powerful IFBB at the helm, prevents the latter from seeing a competitive bodybuilder move from one federation to another. This limits competitiveness because the hiring of a bodybuilder by one federation would represent a loss for another. Each federation would hire a bodybuilder at the level where the marginal income s/he represents would equalize his/her marginal cost, according to an exogenous equilibrium wage. This in turn decreases the overall competition and hence revenue. The industry of bodybuilding is the opposite of this. Furthermore, the federations act as direct employers of their competitors. Such a position of monopsony allows them to control the champions, as well as wages, in the sport.

However, the limited number of competitors, in particular due to professionalism (around 30 professional bodybuilders affiliated to the IFBB in the world), also maximizes income for the best bodybuilders. More precisely, the aim of the IFBB as a single federation is to drive down wages on the whole while rising revenue for the top bodybuilders in order to increase 'internal' competition between them inside the federation. If the income of the winner of Mr Olympia were roughly \$1,000 in 1975, it is about \$250,000 today, along with an SUV Hummer. The best thing for federations, therefore, is both to renew competitors in order to foster competition, while creating 'legend champions' through winning medium-term competitions.

One can observe, for example, that even though Mr Olympia has been in existence for 50 years, there have actually been 13 different winners, who each have their own 'realm'. Such a non-balanced framework indicates the extent to which bodybuilding is not sportively competitive while being economically competitive – hence meaning maximization of profits – because it can rely on 'stable champions' promoting the sport.

This means that the 'bodybuilding's industry' operates under imperfect competition conditions, even a quasi-monopoly: it imposes its transaction conditions on those competing, and then on the consumers.

#### 2) The media

The media plays a dual role, both on the demand and supply sides. In the first, it has the expertise and technical equipment to arouse the interest of consumers. On the other hand, it brings important financial resources to sport in terms of broadcasting rights (Thibault 2009). Here I can distinguish two sorts of media: those that are directly linked to body-building, and the rest. As far as the first are concerned, the major media are magazines, the most relevant belonging to Joe Weider during his lifetime. The latter began his

business career in 1940 by creating a new magazine on bodybuilding, called *Your Physique* (which became *Mr Builder* in 1952). Others like *Muscle Power* in 1945 (*Mr America* thereafter) or *All-American Athlete* (1963) were also born. However, the most important nowadays are undoubtedly *Muscle & Fitness*, as well as *Flex*, which have developed in tandem with bodybuilding.

The first is designed for mainstream lifestyle fitness and bodybuilding (there is a special version for women), while the second is more hardcore. Their worldwide circulation is in excess of 340,000 (*Muscle & Fitness*) and 78,000 (*Flex*) per month. They are attractive because professional bodybuilders often exhibit themselves within, giving advice about their life and training – in this way, an ordinary bodybuilder can learn more about the bodybuilding world. And there are other magazines, such as *Dynamag*, that specialize directly in selling products and also have a broad audience.

Second, in terms of media that is independent from bodybuilding, over the course of the twentieth-century television has become the most important medium with which to entice people (Andreff 2008). For this reason, Joe Weider has done his best to diffuse Mr Olympia through broadcast programs. Along with his brother, his great dream was for bodybuilding to be recognized as a major sport by the International Olympic Committee (IOC) in the hope of gaining a TV audience and then increasing revenue. If they succeeded with the IOC's inclusion of the IFBB as a provisional member in 1998, and a permanent member in 2000, they were unsuccessful in achieving their goal with the refusal to demonstrate the sport at the 2004 Summer Olympics in Athens. Hence, if bodybuilding today has a TV audience like other sports, it still remains a relatively small audience.

Nevertheless, bodybuilding has tried to enter what many researchers (Miller *et al.* 2001, Raney and Bryant 2006) call the 'Global Sport-Media Complex', or the 'Golden Triangle' (Honeybourne *et al.* 2000, Nixon 2008). Such expressions capture well the interplay of media, firms and sports' organizations: they all benefit from what they bring to one another in this particular relationship (Thibault 2009). Through the revenue created, large amounts can be invested in the industry to pursue its expansion.

3) The products, the gyms, the technics at home

Firms provide sponsorship that helps a sport to grow. For bodybuilding, these are the firms specializing in nutrition, as well as the technical products that have allowed the IFBB to become more powerful, fostering the development of professionalism. Moreover, they deal with a highly standardized global market – firms can realize global sponsorship. In particular, the Weider Company<sup>2</sup> has been at the core of the process, for the following reasons:

- It used to belong to the Weider Brothers, the main IFBB leaders.
- Joe Weider was the owner of a large company selling fitness products (nutrition, technical materials, clothes, magazines), employing the main 'champions' of the IFBB to generate advertising. In other words, IFBB professional bodybuilders have a strong interest in appearing in Weider's magazines to build their career. Furthermore, Weider's magazines are at the core of the 'bodybuilding's industry': for instance, *Flex* is the main sponsor of the first IFBB's annual contest, the FLEX Pro Championships.

The inconvenient truth in such an industry is that there exists a 'dark side'. For instance, pharmaceutical companies often enter the system (Vallet 2014). According to

testimonies, the deal they offer some bodybuilders is to give them products freely – forbidden ones (drugs), according to the IOC's rules – in order to test the side effects on them before their wider diffusion. It is economically interesting for the two participants of such a deal: on the one hand, firms can test their products freely; and, on the other hand, bodybuilders can use them freely, improving their chances of winning competitions, as well as their ability to sell such products in gyms to new participants. As a result, they have more money to compete.

While the use of such products is officially banned (because of medical and ethical principles, as well as the reduction of uncertainty), it is in fact highly tolerated and even encouraged because it fosters the quality of the show and improves the predictability of results for the 'champions' (Berentsen 2002). Despite the fact that this destroys the sport over time, the system relies on institutionalized doping. The IFBB does not process anti-doping controls, or only for some products, which was one of the problems associated with the IOC's non-acceptance of bodybuilding in the Olympic Games.

For competitors, the 'bodybuilding's industry' works through the so-called 'prisoner's dilemma' framework with respect to doping: although they know each other, professional bodybuilders don't entirely share their 'miracle receipt'. There is therefore uncertainty, both when individual levels are perceived as equal and when they are not. Indeed, in the latter, the best bodybuilder, who would have a genetic advantage for instance, would be likely to dope given that s/he anticipates lower-level bodybuilders to dope. Furthermore, given that there are strong differences between prizes ('the winner takes it all') and there are no real controls, each bodybuilder has a strong incentive to dope and consequently doping tends to spread throughout the community.

However, I must go further: if the previous 'magic triangle' of the 'bodybuilding's industry' is economically efficient, it is because it is gendered-biased, as I explain in the next section.

#### 4. Gender and the 'bodybuilding's industry'

Like every industry, the 'bodybuilding's industry' has a gendered dimension, given that the gender process and ideologies are embedded in globalizing capitalism, especially because it serves as a resource for capital (Acker 2004). Hence, this means that gender is at the core of the aforementioned 'magic triangle', in two intertwined ways: the hyper valuation of 'the world of men' and the hypo valuation of 'the world of women'. Both the 'production' and 'circulation' spheres quoted above rely on the binary opposition of these two worlds. Gender is strongly useful to understanding such an industry because gender is a hierarchized system dividing the world into the previous two categories (Connell and Messerschmidt 2005). Thus, this gendered framework entails the reproduction of images and ideologies that support difference and inequality (Acker 2004).

Obviously, such categories are heterogenic, as well as there being situations that 'trouble gender' (Butler 2006). However, at their core they possess a 'hub' that stresses binary relationships (male/female; men/women; masculinity/femininity), from which every individual defines his/herself. Hence, gender is about structures but also their individualization through the 'spokes' that are less or more linked to the 'hubs' and that correspond to the different individual standpoints toward them (Vallet 2014). Gender is strong because it relies on the strength of the 'hubs' that legitimate its logic and create a performative dimension (Butler 2006): it creates reality, especially through its naturalization.

This explains why body matters following this logic, given that it can be used to anchor in nature the differences and inequalities (Butler 2009). The body allows someone to 'do', to 'not do' or to 'undo' gender (West and Zimmermann 1987). During its history, bodybuilding has built its structures through this gendered framework that has overvalued men and the 'hub' of masculinity, referring to the aforementioned 'hegemonic masculinity' (Carrigan *et al.* 1985).

As Weider used to say: 'Ya know? In every age, the women, they always go for the guy with muscles, the bodybuilder. They [the women] never go for the studious guy' (Klein 1993, p. 154–5). Bodybuilding promises a man the transformation of the self through the transformation of the body (Klein 1993). Weider clearly takes this on, indicating to what extent he has built his empire from masculine weakness (Reynolds and Weider 1989, Steere *et al.* 2006). Schwarzenegger himself remembers when Weider told him to come to the USA partly for this reason (Merritt 2013, Schwarzenegger 2013).

From this perspective, movies like *Pumping Iron* have played a significant role in popularizing bodybuilding (Holmlund 2002). Such a movie showed, in 1977, what the principles of bodybuilding were through the perspective of Arnold Schwarzenegger, presented as 'the' model to follow. Schwarzenegger is presented as a foreign, self-made man who succeeds thanks to his own endeavors alone, through the methodic work of his body.

Thus, he perfectly suits the principles of the 'production sphere' developed above regarding the links between bodybuilding and gendered capitalism, from the 'hegemonic masculinity' perspective. Although he used to have a 'perfect' body as far as the bodybuilding contest criteria of his era were concerned, Schwarzenegger is above all an 'economic creation' for the needs of the 'bodybuilding's industry': he used to win Weider's main contests and he used to advertise Weider's products in the latter's magazines.

This explains to what extent the previous equation can only be solved thanks to a high degree of involvement making the 'magic triangle' work: bodybuilder superstars are displayed in magazines to attract the men who buy them because they want a muscular body to attract women; they are ready to work out and to consume products like superstars do. Consequently, the 'bodybuilding's industry' is clearly based on a double-sided gendered perception tied to 'hegemonic masculinity': lack and fears.

The first perception deals with the fact that a bodybuilder must always roll back the limit of the body in order to accumulate in a competitive and liberalized market, as high-lighted above. I argue that this is clearly linked to the contemporary era of capitalism: as bodybuilding relies on the permanent improvement of the self to be better than others, it emphasizes the norms and behaviors associated with individual economic rationality, productivity and efficiency. In other words, bodybuilding values the 'survival of the fittest' (Beneria 1999) in the economic market or in the 'market of signs', with a focus on lean mass: growth with costs that are as low as possible.

What is worth noting from this is that such links with markets have been historically different for men and women, with different associated consequences for their life (Beneria 1999). From such a different positioning towards markets, men have been associated with public life appearing naturally male; women, on the contrary, have been linked to private life (Strassman 1993). Moreover, the value of muscle on the markets has a uniquely

male aspect: although muscles are biologically neutral, historically they have been associated with men and masculinity (Hargreaves 1994, Griffet and Roussel 2004).

For this reason, both from sporting and economic perspectives, the presence of women in bodybuilding as in modern sports has been limited and ascribed less value, given women are the contrary of 'hegemonic masculinity'. Modern sports were associated with men and strong masculinity very early (Cooper and Smith 2010). More accurately, a muscular body was a sign of the 'all-powerfulness' of 'hegemonic masculinity' (Connell 1995). Consequently, women were either put outside 'major' sports or oriented towards muscular activities consistent with their 'nature', albeit with less social and economic value.

That does not mean any value at all: female bodybuilders are also a market for the 'bodybuilding's industry'. Since some women can perceive bodybuilding as a way toward empowerment (Felkar 2012), it strengthens the market by widening or deepening demand. Since gaining lean muscle has become the norm in bodybuilding for more than 20 years (Griffet and Roussel 2004), female bodybuilders' endeavors for reaching it reinforce the economic pillars of the 'bodybuilding's industry' in two ways. First, since women contests also rely on the spectacular logic of bodybuilding, the popular attractiveness of bodybuilding among women is increased, without jeopardizing male bodybuilders' market because the latter has its own – superior – logic. Second, leading bodybuilding female figures who compete in contests send the message that the will to transform the body is sufficient to change one's destiny.

Nevertheless, the 'production sphere' regarding this kind of consumers stresses more the positive effect on health for them instead of highlighting gender issues. As a result, women were excluded until the 1970s for the reason that female bodybuilding physiques were not sufficiently 'natural'. Far from troubling gender, female bodybuilders are ostracized through bad jokes, competitions that are valued less and the necessity of 'being naturally' women or 'apologizes' (Schulze 1997).

Once again, such a framework linked with 'hegemonic masculinity' does not mean the absence of ambivalence. The hardcore practice of bodybuilding seems to blur dichotomy associated with 'hegemonic masculinity', due to the transformation of the body: for example, some male steroids users experience an 'emasculation' (shrinking testicles) or develop female characteristics (gynecomastia). Symmetrically, female bodybuilders exhibit more aesthetically male bodies that some men with respect to the current societal norms (Aoki 1996).

However, female bodybuilders must still refer to the original bodybuilder male body model, which reveals a failure of specific imaginary and symbolic identification (Aoki 1996). This trend has prevented women from empowerment and social and economic recognition, as well as building a positive individual identity (Bunsell and Schilling 2009).

In my opinion, this is why the gender framework is particularly useful for understanding the economics of bodybuilding: it tackles the issues of a 'forbidden' market whose features and functioning seem to be 'natural' or taken for granted. To put it another way, gender and, more importantly, 'hegemonic masculinity' question basic economic assumptions such as the value of efficiency, the omnipotence of selfishness and the impossibility of interpersonal utility comparison (Strober 1994).

Bodybuilding is also likely to be attractive in a world characterized by more insecurity: as there is a questioning of maleness through the growing insecurity of jobs – because of

the image of men as the breadwinners – developing the body through bodybuilding is a good way to show off the image of successful entrepreneurship, as highlighted above.

The previous sentence offers incentives to go further with the second gendered perception: because s/he (but especially he, as I have underlined the weight of 'hegemonic masculinity') always wants more, a bodybuilder faces several fears because of the characteristics of the macroeconomic, as well as the macrosocial, system. As the latter works on the need to demonstrate health as a productive indicator (Andrews *et al.* 2005), bodybuilding is the right way to do it. In other words, bodybuilding can be seen as the perfect means to fight disease and to appear healthy in the context of 'second modernity' presented above (Monhagan 2001). Specifically, this means that such a sport's perception relies on the fight against degeneration and then the fear of death (Shilling 1993).

Therefore, such fears are 'good news' for the 'bodybuilding's industry', because they legitimate its principles and the race to industrial goods to reach the goals (nutrition, products, and so on). Moreover, the media stress the positive effects of exercise on health in return (Davis and Scott-Robertson 2000). Hence, the bodybuilder becomes a consumer-entrepreneur, if s/he wants to concretize the perception.

Another important fear that the 'bodybuilding's industry' faces through the spread of its perception is, of course, the 'gendered fear'. In the male-dominated world of bodybuilding, there is no place for the weakness that is often associated with women or womanhood (Berry 2010). Such principles clearly took place very early in Macfadden's comics ('*Hey skinny, your ribs are showing*'), in Atlas' advertising for courses and in movies such as *Pumping Iron*. Holmlund (2002) highlights to what extent the problem of manhood is always present in such a movie, with the underlying fear of seeing it disappear.

This fear legitimates the practice to be sure to be a man. Indeed, as Simpson says:

The male bodybuilder dramatizes in his flesh the insecurity, the uncertainty, the enigma of masculinity. He is a living testament not so much to the capabilities of the male body, its phallic power, its massive irresistible virility, but rather to ... the fluidity of the categories male and female, masculine and feminine, hetero and homo, and the fabulous, perverse tricks they play (Simpson 1994, p. 42).

From this gendered perspective, doping appears to be rational, because 'worryingly, today's society tells us that the steroid enhanced, lean, muscular physique embodies not only the healthy lifestyle to which we should all aspire, but also the minimum physical standard that all men are expected to attain' (Mosley 2009, p. 196). In that sense, bodybuilding blurs the line between actual health and visible health: as the latter is more important than the former in contemporary society (Monhagan 2001), bodybuilders could adopt an unhealthy behavior to grow a healthy 'looking' body (Andrews *et al.* 2005). Therefore, even though doping endangers health, it becomes highly attractive for male bodybuilders seeking to 'do gender' (West and Zimmerman 1987) through the display of their bodies (Eisenberg *et al.* 2012).

The best way to understand how such principles work in interaction is to analyze the material through which they are best represented, namely magazines. Indeed, it is noticeable on this topic that in his magazines Weider has increasingly associated a huge male bodybuilder with women in the picture, either explicitly or implicitly, referring to 'hege-monic masculinity'. The message is that a muscular male body is attractive because it is 'sure'. It is worth noting that there are no significant bodybuilding magazines entirely dedicated to women. Although *Muscle & Fitness*, and to a lesser extent *Flex*, contain articles about training exercises for women, they are undoubtedly more male-oriented. Likewise, references to homosexuality in magazines are banned, in the sense the topic is explicitly avoided or hidden. For instance, male bodybuilders are often pictured with women staring or ogling them; or advertisement for male nutritional supplements frequently refer to their positive effect, largely increases in testosterone levels, in attracting women.

For these reasons, I must delve further into such a dimension because it has strong economic consequences. I use a qualitative method to do this, which has two main advantages: it allows me to investigate this field where quantitative data is not available, and it suits the gender framework, examining the narrowly quantitative approach of male economists and stressing the need to focus on the gendered dimension of fields through the qualitative approach (Strober 1994).

#### 5. Empirical evidence: How the 'bodybuilding's industry' works through the media. The French magazines example

I have undertaken a study that constitutes the analysis of 27 bodybuilding magazines. These magazines were read by the bodybuilders in three gyms in where my research took place over a one-year study period<sup>3</sup>. Among them, there were 23 consecutive issues of *Dynamag* (from June to July 2009, and January to February 2013), 3 consecutive issues of *Flex* (from June to July 2010, and October to November 2010) and 1 issue of *Science & Muscle* (summer to autumn 2008). *Dynamag* is a French magazine dedicated to every bodybuilder (from beginner to expert), while *Flex* and *Science & Muscle* focus more on hardcore bodybuilding (although they are American, they are sold in France in French).

Arguably, the magazines are at the core of bodybuilding because they make the link between the perception of bodybuilding presented above and the subjectivity of each bodybuilder. Consequently, a male bodybuilder can find advice and models to achieve his own goal through the production of the performing body while allowing the industry to make money. Specifically, among other interesting elements, I have tried to examine the previous elements, showing a link between bodybuilding and gendered capitalism, allowing such a sport to exist as an industry, through three main pillars – work, performance and 'hegemonic masculinity', the latter determining the previous ones – which take place within a gendered problematic.

Hence, I have analyzed the magazines, focusing on the way that work, performance and 'hegemonic masculinity' are presented through the photos, the sentences used and their framework. As I believe that 'hegemonic masculinity' drives the gendered industry of bodybuilding, work and performance are closely tied to this concept. For this reason I have looked at the way they are presented in the magazines, through the use of Ruona's framework regarding qualitative data analysis (Ruona 2005, p. 236–240):

- 1) Sensing themes: I tried to perceive the most important gendered patterns in the magazines.
- 2) Constant comparison: my aim was to define meaning categories gathering the previous patterns from the comparison of the content of the magazines.
- 3) Recursiveness: this step was dedicated to the reconstruction of data.

	Criteria	Work	Performance	Hegemonic masculinity
Stress on work and performance	<ol> <li>Photos         <ol> <li>The way that bodies are shown off                 <ol> <li>Scenic designs</li> <li>Language</li></ol></li></ol></li></ol>			

Table	1. Anal	ysis table	e of the	bodybuilding	g magazines.

Source: The author.

- 4) Inductive and deductive thinking: my goal was to link my findings to the gendered framework, and especially to 'hegemonic masculinity'.
- 5) Interpretation to generate meaning: I tried to define interrelationships between relevant elements in order to frame a model of understanding of the gender-based 'bodybuilding's industry'.

Table 1 gives more details regarding my method.

First, my analysis indicates that the magazines have two main intertwined roles: to sell, and to spread the collective perception of bodybuilding, which each bodybuilder integrates. As Klein (1993) highlights, what matters in terms of the media is to convince the male bodybuilder that he can improve his life thanks to the transformation of the body, through his own efforts, which are sources of individual profit. In this way, he subscribes to the economic rule of the industry because the latter appears practicable, chosen and not undergone, which is also attractive to those who wish to enter such a sport. In other words, they spread a perception that is a strong incentive to produce the performing body previously presented.

For this reason, the economic challenges of the magazines rely on both the unusual and spectacular (extraordinary) and the usual (ordinary): they show that every goal can be reached. For instance, in my material, in 70% of cases, the magazines have one page dedicated to an unknown bodybuilder's life whose physical characteristics are not beyond the rules, like professional bodybuilders. The word 'usual' means anchorage to reality through the everyday life of bodybuilders, but also through 'serious' developments.

I refer here to scientific analysis, which brings knowledge to the sport, allowing fans to be more confident about the advice given, thus reinforcing their adherence. On this point it is interesting to observe that such a modern scientific anchorage is often linked to the 'ancient': 'Insulin is in a sense our hormone of survival. This function, engraved in our genes, goes back to the time when our distant ancestors, facing epidemics of famine, needed reserves of strategic energy to survive' (Dynamag n° 79, p.12); 'Science reinvents mythology' (Dynamag n° 79, p.17);

The athletes of Antiquity already knew it: we found the track, in the archives, of participants in the Olympic Games who got ready by following a dietary plan based on red meat. They ignored that they were the first ones to use creatine but it is nevertheless the case ... (Dynamag, n° 81, p. 7);

'Modern science does not stop it rediscovering what the traditional medicines have known for thousands of years' (Dynamag n° 97, p. 20).

Furthermore, applying my analytical framework to the magazines clearly indicates the high value of work, as well as performance. Again, the 'ancient' is invoked in many ways. The word 'work' is always associated with effort: each article on a champion contains this word at least once, whatever the magazine. Such work is valued through the use of heavy weights, which are staged by the image: halters are extremely heavy and are taken very close from the objective, which stresses the exploits of the bodybuilder who is lifting them. Heavy weights are often also damaged, going back to 'gross' and 'primeval' weights that are transmitted from generation to generation: references to the 'strong men' of Antiquity or the end of the nineteenth century, such as Sandow, take place.

Bodybuilders are frequently depicted with a naked and shaved chest, in a style reminiscent of certain representations of antic athletes. Such a feeling is reinforced by using photos in black and white in many cases. Inside *Dynamag*, 7 pages of 47 in the magazine are in black and white (in 75% of the cases, such pictures present a specific workout). In *Flex*, between 31 and 49 of 128 pages are in black and white. In four cases, the cover pages of the magazines are also in black and white.

Following such a logic, in which the 'ancient' is alive in the current work of a bodybuilder, both advice and explicit comparisons with ancient periods are given. Clearly, current bodybuilders are compared during their workout, sometimes through the opposition of black and white/color photos (Flex, n°101, p. 85). Old rules are often specified – '*The 12 rules about anabolism*' and '*The 9 basic rules*' – presented in colors that are reminiscent of marble, as if they were religious rules.

Furthermore, pain is always presented, either through explicit sentences ('Maximum pain', Flex, n° 100, p. 28) or the bodily attitudes depicted in the pictures. Bodybuilders are systematically sweating, expressing the pain on their face with a grimace: this is the 'no pain, no gain' philosophy that can be tied to productivity and its benefits. An anonymous bodybuilder has to feel it if he wants to improve his level, as several covering pages of *Dynamag* promote: 'No time to lose' (in two issues), 'Just boost' (in two issues), 'Optimize' (in two issues), 'Be your best' (in two issues), 'Maximum intensity and efficiency' (in three issues), and 'Gain and results' (in three issues).

Magazines are also clearly gender-oriented, from the perspective of 'hegemonic masculinity'. As Berry (2010, p. 189) demonstrates, such magazines stress the following perception:

If I engage in these sport activities, wearing these athletic clothes, and taking these supplements, I'll be hugely muscular, win prizes, and be surrounded by gorgeous and adoring women. I'll be considered dangerous and not to be messed with by my peers. And I will accumulate wealth beyond my wildest imagination.

If I follow the double perspective of extraordinary/ordinary previously mentioned, magazines always focus on perfect male bodies, starting with the cover page. Very often, they look like antic statues: muscles are contracted, they strike a strict and aesthetic pose, and the body is nearly naked to resemble a sculpture (Dutton 1995). In some cases, they are near Sandow's trophy (Flex, n°101, p. 98). The message is direct: such a male body is attractive to women from a heterosexual perspective (Klein 1993). Specifically, body-building improves not only the exterior body but also the interior, using male hormones.

Advertising for some products enhancing endogen testosterone production show a picture of a woman in bikini looking at a bodybuilder with an open mouth: '*Get Into This Box*... *And You Too Will Understand*...' (Science & Muscle, p. 35).

Conversely, women are not presented in the same way, even when they work out. If their body is photographed, it is from the back perspective and with reference to exercises for the lower part of the body that are conducted in a sexual position. Female body characteristics (chest and make-up, for example) are exaggerated by the perspective, reminding us that 'hegemonic masculinity' also works with the overvaluing of femininity (Carrigan *et al.* 1985, Roussel and Griffet 2000). Nevertheless, they have less exposition than men (on average in *Flex*, there is only one report for female athletes on two to six pages, against three for men, on seven to eleven pages) and are generally found at the end of the magazines with the articles about being thin.

In *Dynamag*, women first appear on page 40 (of 47 pages), in a special section entitled '*Fitness and thinness*', in which the fight against fat is omnipresent, with photos depicting women measuring parts of their body. Such a focus on the 'figure', as well as the pathologic dimension of the fat body, is illustrative of the gendered societal vision: a thin body for women and a muscular body for men. Hence, for men, weakness is linked to a skinny body, justifying involvement in the bodybuilding economic framework (gyms, products, and so on). *Flex* stresses this in an article that says: '*Biceps are the first thing a person sees: women are crazy about it, men respect you*' (Flex, n° 101, p. 53); '*This weight seems ridiculous*' (Flex, n° 101, p. 46); '*If I were you, I wouldn't take such wimps' weights*' (Flex, n° 99, p. 35); and '*This is not a workout for wimps*' (Flex, n° 100, p. 48).

'Hegemonic masculinity' is used for economic reasons in this way, as well as through the calling of 'bodybuilding heroes': their perfect and extraordinary body is at the core of their power, and that is why every bodybuilder has to do his best – thanks to consumption – to become like them. One can hear, for instance: '*His workouts could last for 6 hours and he used to train during several weeks without any breaks*' (Flex, n° 100, p. 30); '*He used to lift weights that even the strongest bodybuilders couldn't*' (Flex, n° 100, p. 25); and '*During almost 25 years, the workouts of the West Coast's Warrior have been legendary*' (Flex, n°100, p. 33). Here the reference to the perception of work is clearly visible, because if you want to be a 'hero', you have to earn it through work.

Furthermore, such bodybuilders are presented as part of a great history of their sport, with the use of selected words in the title of articles as well: '*The Golden Age*' (Flex, n° 99). Or '*these are historic pictures of historic physiques*' (Flex, n°101, p. 66), in which bodybuilders are presented in black and white pictures or in special sections such as '*Retrospective*' in *Flex*; '*Tales take place in far away, mysterious and traditional universes. This is the case of Wolf's legend*' (Flex, n°101, p. 42); and '*We call him The Myth, and he deserves his nickname*' (Flex, n°101, p. 54). The bodybuilders are often dressed as mythological characters such as Hercules, or as gladiators.

Nevertheless, at the extreme, such a will to anchor bodybuilding in a 'glorious past' makes visible its fascist face (Klein 1993, Mangan 2000, Holmlund 2002): only one kind of body is celebrated and gives access to power as well as social status. In other words, the body of bodybuilding can only exist in our contemporary consumer societies if an 'irrational' and 'imperfect' body exists in comparison, and then has to be fought. Conversely, in societies that attribute value to the development of less body fat, bodybuilding embodies a certain social Darwinism: the perception of a perfect and augmented muscular

body creates physical elitism. Furthermore, it sustains efforts in the direction that bodybuilding is consumption and production, 'as the others' in contemporary capitalist societies: it relies on standardized elements, creating a 'one-dimensional man'.

#### 6. Conclusion

This article attempted to shed light on the features of an underestimated sport by social researchers such as economists, namely bodybuilding. I have examined to what extent it deals with capitalism, given that it has succeeded in building a strong industry over time. In particular, the media and, above all, magazines have played a significant role in the history of its development to reach such a flourishing business. For this reason I have stressed the characteristics of the 'bodybuilding's industry' from the gendered framework relying on 'hegemonic masculinity'.

Furthermore, it would be interesting to forecast what such an industry will become in the future. Indeed, in sport, there exists a positive and significant correlation between the place in which a sport was born and its practice (Augustin 1996). This is the case in bodybuilding within Western societies, meaning that perhaps the main challenge for the 'bodybuilding's industry' in the coming years will be to manage to enter the developing and emerging countries' market. If bodybuilding is perceived as a good way to catch Western societies' consumption rule, then such a sport will become more attractive. The staff of the IFBB has understood such potentialities, organizing more and more competitions, exhibitions and shows in these countries. Furthermore, there are increasing numbers of champions emerging from these countries.

However, from this perspective, I don't know if such countries will be able to improve their situation because there exists an uneven development of sport globalization, since the sporting economy has grown at nearly the same pace as GDP in most countries around the world (Andreff 2008).

#### Notes

- 1. He died in 2013.
- 2. Whose value is estimated at around \$ 500 million (Lafrance 2012).
- 3. More details on the research are available on demand.

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#### Notes on contributor

*Guillaume Vallet* holds two PhDs, one in economics and the other in sociology. He is Associate Professor of economics at the University of Grenoble-Alpes (France), and associate researcher at the Institute of Sociological Research in Geneva (Switzerland) and at the CADIS in Paris (France). His main fields of research are on the Swiss economy and monetary system, particularly within the context of the European perspective, and on the history of economic thought, in particular the work of Albion W. Small. He also works on gender.

#### ORCID

Guillaume Vallet 🗅 http://orcid.org/0000-0002-8359-649X

#### References

Acker, J., 2004. Gender, capitalism and globalization. Critical sociology, 30 (1), 17-41.

- Andreff, W., 2008. Globalization of the sport economy. *Rivista di Diritto ed Economia Dello Sport*, 4 (3), 13–32.
- Andreff, W., 2011. Evènementiel sportif, impact économique et régulation. In: M. Desbordes, and A. Richelieu, eds. *Néo-marketing du sport. Regards croisés entre Europe et Amérique du Nord.* Bruxelles: De Boeck, 67–90.
- Andrews, G.J., Sudwell, M.I., and Sparkes, A.C., 2005. Towards a geography of fitness: An ethnographic case study of the gym in British bodybuilding culture. *Social science and medicine*, 60, 877–891.
- Aoki, D., 1996. Sex and muscle: the female bodybuilder meets Lacan. Body & society, 2 (4), 59-74.
- Augustin, J.P., 1996. Les variations territoriales de la mondialisation du sport. *Mappe Monde*, 4, 16–20.
- Baudrillard, J., 1998. The consumer society. London: Sage. [first publication: 1970].
- Becker, G.S., 1964. *Human capital: a theoretical and empirical analysis, with special reference to education.* Chicago: University of Chicago Press.
- Beneria, L., 1999. Globalization, gender and the Davos Man. Feminist economics, 5 (3), 61-83.
- Berentsen, A., 2002. The economics of doping. European journal of political economy, 18, 109-127.
- Berry, B., 2010. Making it Big. Visible symbols of success, physical appearance, and sport figures. In:E. Smith, ed. Sociology of sport and social theory. Champaign: Human Kinetics, 187–200.

Blake, A., 1996. The body language: the meaning of modern sport. London: Lawrence & Wishart.

- Bunsell, T. and Shilling, C., 2009. The female bodybuilder as a gender outlaw. *Qualitative research in sport and exercise*, 1 (2), 141–159.
- Butler, J., 2006. Trouble dans le genre. Paris: La Découverte.
- Butler, J., 2009. *Ces corps qui comptent. De la matérialité et des limites discursives du « sexe »*. Paris: Editions Amsterdam.
- Carrigan, T., Connell, B., and Lee, J., 1985. Toward a new sociology of masculinity. *Theory and society*, 14, 551–604.
- Chapman, D.L., 1994. Sandow the magnificent: Eugen Sandow and the beginning of bodybuilding. Urbana: University of Illinois Press.
- Choi, P.Y.L., Pope, H.G. Jr, and Olivardia, R., 2002. Muscle dysmorphia: a new syndrome in weightlifters \* commentary. *British journal of sports medicine*, 36, 375–376.
- Connell, R.W., 1995. Masculinities. Berkeley and Los Angeles: University of California Press.
- Connell, R.W. and Messerschmidt, J.W., 2005. Hegemonic masculinity. Rethinking the concept. *Gender & society*, 19 (6), 829-859.
- Cooper, B. and Smith, E., 2010. Race, class, and gender theory: violence against women in the institution of sport. In: E. Smith, ed. *Sociology of sport and social theory*. Champaign: Human Kinetics, 129–141.
- Davis, C. and Scott-Robertson, L., 2000. A psychological comparison of females with anorexia nervosa and competitive Male bodybuilders: body shape ideals in the extreme. *Eating behaviors*, 1, 33–46.
- Dunning, E. and Elias, N., 1986. Sport et civilisation. La violence maîtrisée. Paris: Fayard.
- Dutton, K.R., 1995. The perfectible body: the western ideal of physical development. London: Cassell.
- Eisenberg, M.E., Neumark-Sztainer, D., and Wall, M., 2012. Muscle-enhancing behaviors among adolescent girls and boys. *Pediatrics*, 130, 1019–1026.
- El Hodiri, M. and Quirk, J., 1971. An economic model of a professional sports league. *Journal of political economy*, 79 (6), 1302–1319.
- Felkar, V., 2012. Marginalized muscle: transgression and the female bodybuilder. *Ignite*, 4 (1), 40-49.

Flex. 2013. A Tribute to Joe Weider. 117, June–July.

Fort, R., 2003. Sports economics. Upper Saddle River: Prentice Hall.

Foucault, M., 1986. *The care of the self: volume three of the history of sexuality*. New York: Pantheon Books.

- Green, J., 1997. Risk and misfortune: a social construction of accidents. London: UCL Press.
- Griffet, J. and Roussel, P., 2004. Le muscle au service de la beauté: La métamorphose des femmes culturistes. *Recherches féministes*, 17 (1), 143–172.
- Hargreaves, J., 1994. Sporting females: critical issues in the history and sociology of women's sports. New York: Routledge.
- Holmlund, C., 2002. Impossible bodies. Femininity and masculinity at the movies. London: Routledge.
- Honeybourne, J., Hill, M., and Moors, H., 2000. *Advanced physical education and sport. For AS level.* Cheltenham, UK: Nelson Thornes.
- Hutson, D.J., 2013. 'Your body is your business card': bodily capital and health authority in the fitness industry. *Social science & medicine*, 90, 63–71.
- Jutel, A. and Bluetow, S., 2007. A picture of health? Unmasking the role of appearance in health. *Perspectives in biology and medicine*, 50, 421–434.
- Kimmel, M., 2013. The gendered society. New York: Oxford University Press.
- Klein, A.M., 1993. *Little big men: bodybuilding subculture and gender construction*. Albany: State University of New York Press.
- Lafrance, M., 2012. Le développement personnel selon les frères Weider: l'hétérosexualité masculine et l'histoire du culturisme à Montréal. In: J.P. Warren, ed. *Une histoire des sexualités au Québec au XX<sup>è</sup> siècle*. Montréal: VLB, 122–137.
- Luciano, L., 2001. Looking good. Male body image in the modern America. New York: Hill and Wang Editors.
- Mangan, J.A., 2000. Superman supreme: fascist body as political icon: Aryan fascism. London and Portland, OR: Frank Cass.
- Merritt, G. 2013. Joe Step by Step. Flex, 117 June-July, 14-20.

Messner, M.A., 1992. Power at play: Sports and the problem of masculinity. Boston: Beacon Press. Miller, T., et al., 2001. Globalization and sport. Playing the world. London: Sage.

- Monhagan, L.F., 2001. Bodybuilding, drugs and risk. London: Routledge.
- Mosley, P.E., 2009. Bigorexia: bodybuilding and muscle dysmorphia. *European eating disorders review*, 17 (3), 191–198.
- Neal, L. and Williamson, J.G., 2015. *The Cambridge history of capitalism*. Cambridge: Cambridge University Press.
- Nixon, H.L., 2008. Sport in a changing world. Boulder, CO: Paradigm.
- Raney, A.A. and Bryant, J., 2006. Handbook of sports and media. Abingdon, UK: Routledge.
- Reynolds, B. and Weider, J., 1989. *Joe Weider's ultimate bodybuilding: the master blaster's principles of training and nutrition*. Chicago: Contemporary Books Inc.
- Roussel, P. and Griffet, J., 2000. The path chosen by female bodybuilders: a tentative interpretation. *Sociology of sport journal*, 17, 130–150.
- Ruona, W.E., 2005. Analyzing qualitative data. In: R.A Swanson and E.F. Holton, ed. *Research in organizations: foundations and methods of inquiry*. San Francisco: Berrett-Koehler Publishers, 233–262.
- Schulze, L., 1997. On the muscle. In: P. Moore, ed. Building bodies. New Brunswick: Rutgers University Press, 287–308.
- Schwarzenegger, A., 1998. The new encyclopedia of modern bodybuilding. New York: Simon & Schuster Paperbacks.
- Schwarzenegger, A., 2013. Total recall. Paris: Pocket.
- Shilling, C., 1993. The body and social theory. London: Sage.
- Simpson, M., 1994. Male impersonators: men performing masculinity. New York: Routledge.
- Steere, M., Weider, B., and Weider, J., 2006. Brothers of iron. Champaign: Sports Publishing LLC.
- Strassman, D., 1993. Not a free market: the pethonic of disciplinary authority in economics. In: M. Ferber, and J. Nelson, eds. *Beyond economics Man*. Chicago: University of Chicago Press, 54–68.

- Strober, M.H., 1994. Rethinking economics through a feminist lens. *American economic review*, 84 (2), 143–147.
- Szymanski, S., 2010. Economists and sport history. Journal of sport history, 37 (1), 71-82.
- Thibault, L., 2009. Globalization of sport: an inconvenient truth. *Journal of sport management*, 23, 1–20.
- True, J., 2000. Gendering post-socialist transitions. In: M.H. Marchand and A. Sisson Runyon, ed. *Gender and global restructuring: sightings, sites and resistances*. London and New York: Routledge, 74–95.
- Turner, B., 1996. The body and society. London: Sage.
- Vallet, G., 2014. Le sens sexué d'une pratique sportive extrême. Le cas des pratiquants de bodybuilding. PhD Dissertation. University of Geneva/Ecole des Hautes Etudes en Sciences Sociales.
- West, C. and Zimmermann, D.H., 1987. Doing gender. Gender and society, 1, 125-151.
- Westerbeek, H. and Smith, A., 2003. Sport business in the global marketplace. Hampshire, UK: Palgrave Macmillan.
- Zebrowitz, L.A., 1997. Reading faces. Window to the soul? Boulder, CO: Westview Press.