Social capital: implications from an investigation of illegal anabolic steroid networks

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Abstract
Numerous studies have linked the constructs of social capital with behaviours that are health enhancing. The factors of social trust, social cohesion, sense of belonging, civic involvement, volunteer activity, social engagement and social reciprocity are all associated with social capital and their existence is often linked with communities or settings where health enhancement is high. Utilizing an interpretive perspective, this paper demonstrates how the existence of social capital may enhance the transition into drug use, the experience of using an illegal drug and decrease the risk of detection. It highlights how social capital may contribute to behaviours which are not health enhancing. Using a variety of data, including participant observation of 147 male anabolic steroid users and 98 semi-structured in-depth interviews with male anabolic steroid users, dealers and distributors it was found that social capital facilitated the operation of the illegal anabolic steroid distribution network. The subcultural norms and social trust that existed within the network allowed anabolic steroid dealers to sell the drug to others with reduced risk of detection. It is argued that social capital facilitates the distribution of illegal anabolic steroids and that social capital is a non-discriminatory concept, that may enhance both negative and positive health-related behaviours.

Introduction
Social capital
There has been significant debate regarding the concept of social capital, its existence, its usefulness, the constructs that define it, how it can be used and how it can be measured (Bourdieu, 1986) [1–8]. Studies have indicated that social capital has an inverse association to homicide [9], and that high levels of social capital are associated with reduced total morbidity and mortality from heart disease and intentional and non-intentional injury [7, 10, 11]. As a consequence, social capital has come to be viewed both instrumentally as a way of achieving positive health and terminally as something good in and of itself. Yet, there appears to be little consensus as to how to measure social capital with recent publications using single surrogate measures such as blood donation or voter turn out and many using only one or two social indicators such as participation, trust or per capita voluntary membership [4, 12–17]. Further, authors such as Kennelly et al. [18] and Baum and Palmer [19] have challenged the association between social capital and health enhancement and Lochner et al. [7] called for further exploration of the downsides of social capital. While this concern is a reasonably recent phenomenon in the health literature, it is a discussion that has

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been occurring in the social science literature for several years [8, 20]. For example, Portes [21] provided a summary of four negative aspects of social capital including exclusion of outsiders, excess claims on group members, restriction of individual freedoms and a downward levelling of norms.

Utilizing a symbolic interactionist approach, this paper set out to investigate the existence, form and function of social capital in an illegal drug-dealing network. Using data collected from illegal anabolic steroid users and dealers in Perth, Western Australia, this paper adds to the social capital debate by describing the form and function of social capital in a hypermasculine setting and illustrating how the constructs that define social capital can facilitate an illegal activity, which may not be considered health enhancing.

There were a variety of definitions of social capital that could have been used in this paper. Coleman’s perspective was most consistent with the interpretive paradigm used in this investigation, particularly the concepts that social capital inheres in the relationships between the actors and among the actors, that it is not completely fungible but specific to certain activities and that the function of social capital emerges as it is defined by how the actors can use it to achieve their own interests [2]. While the investigation occurred within a semi-closed social setting and hence suited the theoretical perspective offered by Coleman [2], a wide range of elements or constructs were investigated so as to provide a comprehensive description of the multiple constructs that make up social capital. Consistent with Coleman’s review, the elements of obligations and expectations, information channels and social norms were investigated. Other constructs of social capital used in this paper come from the social justice perspective [5]. This definition incorporates the elements of social capital as defined by Putman [22], that is social capital is ‘the features of social organisation such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit’. From a social justice perspective, the social organizations referred to in Putman’s definition would include civic and religious groups, workplaces, family and friendship networks and informal community networks. The indicators of social capital within the social justice perspective include a sense of obligation, social cohesion, civic involvement, volunteer activity, social engagement, sense of belonging, high social interaction, social trust and social reciprocity [1, 4, 22–26].

**Anabolic steroid use and related harms in Western Australia**

The following section provides a brief orientation to give the reader an understanding of the context in which the illegal anabolic steroid use was taking place.

Users of illegal anabolic steroids place themselves at risk from social, legal, physical and psychological harms. Anabolic steroid consumption has been associated with the development of gynaecomastia (enlargement of the breasts) in males, transient infertility, testicular atrophy, skin rashes, acne, growth of facial and body hair, oedema (water retention), jaundice, changes in libido and increases in appetite and aggressiveness [27–31]. Occasional chronic side effects include liver disease, cerebral haemorrhage, cardiovascular disease and sterility [32, 33]. Use has also been linked to cardiac hypertrophy and increased serum lipoprotein levels, fluid retention and hypertension as well as blood-clotting abnormalities [34–36]. Psychologically, anabolic steroid use has been linked to mood disorders, suicide ideation, depression, violence, mania and dependency [37–41]. Maycock and Howat [42] found that >60% of an interviewed sample of West Australian anabolic steroid users (n = 42) reported adverse physical or social side effects. These included gynaecomastia, testicular cysts, immune-system impairment and muscular or joint injury.

In 2002, it was estimated that ~30 000 Australians aged 14 years or over had consumed anabolic steroids for non-medical purposes in the last year and 121 000 having used anabolic steroids for non-medical purposes at some time in their lifetime [43]. Anabolic steroids are restricted substances in Australia with criminal penalties for possession. An average of 30 drug charges are laid per year in relation to illegal anabolic steroid use [44]. Use is negatively perceived by the media and the general
public with strong social sanctions being directed towards users [42]. Despite the number of people charged and the negative perception of anabolic steroids, their consumption remains largely unchanged over the last decade.

Methodology and details of data collection
The interpretive sociology of symbolic interaction provided the analytical framework and methodological approach for the investigation. This required the researcher (first author of this paper) to be situated in the anabolic steroid using network. Data were gathered by participant observation of male illegal anabolic steroid using subgroups including crowd controllers, bodybuilders, sportsmen, personal trainers, body image trainers, distributors and dealers. A total of 434 hours were spent in the field and 147 anabolic steroid users were observed. Using theoretical and chain referral sampling, 42 subjects were selected from these subgroups and interviewed. Sampling continued within each subgroup until ‘saturation’ was reached on all analytical elements [45]. All 98 interviews were taped and data transcribed in full. Each interview lasting between 1.5 and 2 hours. Ten of the interviewed subjects were tracked >3 years and interviewed on a regular basis. Nine dealers and 13 distributors were interviewed. Additional interviews were conducted with general practitioners, veterinarians and representatives of the United Kingdom National Criminal Intelligence Service, West Australian Police Service, managers of security companies and health workers. Data were also collected from written material, video footage, the collection of empty drug packaging, analysis of related media stories, monitored changes to policy and procedure and the monitoring of relevant police activity. This multi-modal approach allowed cross-checking of data for convergence and was used to validate the integrity of the data.

The collection of covert (in public settings such as gyms) and overt (in private settings such as homes) participant observation data required the researcher to mix with the subjects in recreational, social, occupational and training (gym and martial arts) settings. Eight gyms were used as observational sites. These were purposively selected as sites likely to contain a large number of anabolic steroid users. Additional observational sites included social settings and workplaces such as nightclubs, subject’s homes and cafes. Typically the work settings were entered with the assistance of a gatekeeper and the social settings with the assistance of a social sponsor. While the lead researcher had developed significant research and theoretical sensitivity during his time as a martial artist and gym instructor and trainer, it was the quality of the social sponsors and gatekeepers that facilitated to enter into the networks. Sites were chosen that provided maximum opportunity to observe anabolic steroids users interacting with one another and with members of the general community. During this time, the researcher interacted with the subjects, training and conversing with them. The researcher used these periods to check understanding and clarify issues, language and other subcultural phenomena. Observational durations varied from several hours to observations made over several months. When possible observational notes were made in the field and a detailed record was made immediately after leaving the site, the researcher varied the observational times to ensure a spread of observed subjects and interaction.

The establishing of relationships prior to interviewing subjects was essential for the data gathering process as it allowed a sense of trust and belonging to develop. The observational periods helped develop this trust as the researcher became some one who was ‘known’. Once an observational period was completed, formal contact was made with selected subjects, informed consent gained and interviews conducted. While observational data continued to be collected during this period the researcher was cognizant that data could be influenced by social desirability as a result of the disclosure. The interview schedule included questions related to demographic and physical details of the subject, history of drug use, effects of drug use, reasons for use, belonging, socialization, trust, reciprocation and social engagement. The verity and consistency of these data were confirmed through comparison with observational and other data sources such as interviews with other subjects in the same group.
Participants in the interviews were selected by snowball technique and the theoretical sampling method. The combination of these methods allowed the researcher to interview within groups of users, both horizontally and vertically and to contact those no longer located within the anabolic steroid network. This approach allowed sampling of individuals who represented different aspects of anabolic steroid use. Participants chosen via the theoretical sampling method were identified as significant individuals by others within their anabolic steroid using network. A variety of subgroups within the anabolic steroid network were chosen for theoretical sampling. These included sportsmen, bodybuilders, recreational users, drug dealers, personal trainers, new users and ex-users. Some subjects identified that they belonged to several groups and may have held multiple roles. Once sampling had been initiated within a subgroup, the snowball technique was used to continue the sampling. If required a second interview was conducted. This allowed the researcher to check anomalies, validate the data and enable the interviewee to view the data and remove any data that they felt placed them at risk or revealed aspects of their interaction they did not want to be revealed (this only happened once). It should be noted that member checking was not routine as full transcription was completed of the audiotapes. During the interview process, the researcher occasionally and judiciously used inflammatory questions (a question designed to examine claims made by the participant) as methods of checking the integrity of the initial responses. Due to the probing nature of an inflammatory question it may produce an emotional response. If responses were not consistent, the researcher identified the discrepancies and sought clarification from the subjects. The same process was used if interview data did not match observational data.

The combination of the data collection methods allowed the researchers to cross-check information or triangulate information and to check for convergence. This enhanced the scope, density, accuracy and rigour of the study [46–48]. During the data analysis process, data were given a validity rating by the researcher. Data were assigned a high validity rating (level one) when it was corroborated by other sources such as observation or interview data or if it was intrasubject data. Data that were potential fabrication but part of the individual’s self-maintenance, for example their front-stage behaviours was noted as such and efforts were made to identify backstage concerns [49]. Data relating to changes to networks that were commonly reported by different subgroups but could not be corroborated by observation or by a person directly involved were also classified as level two data. Data that appeared to be fabrication or rumour and could not be corroborated were given a level three rating. It should be noted that the fabricated data often pointed new directions for investigation as it raised the question of why were they fabricating their response?

All data were managed by the non-numerical unstructured data indexing searching and theorizing software (NUD.IST) [50]. The NUD.IST software assisted in the management and organization of the analytical categories. The construction of categorical data was monitored and verified by another experienced social science researcher. The analytical perspective was grounded in the interpretive sociology of symbolic interaction which provided the epistemological and methodological perspective from which the data were gathered and viewed [51–53]. Data were analysed for evidence of social capital. The analytical elements came from two sources: the social capital literature and included elements of social trust, social cohesion, sense of belonging, civic involvement, volunteer activity, social engagement and social reciprocity and symbolic interaction theory including the dramaturgical metaphor, labelling theory, definition of the situation and the interplay between the person, their self and society [1, 5, 6, 22–24, 45, 49, 51–54].

Findings and discussion

The anabolic steroid using subgroups

Though this research investigated several subgroups of anabolic steroid users, it was evident that there was common language, behavioural norms and
activity sufficient to identify an anabolic steroid using subculture. For all groups, the gym remained a focal point of activity and status. Each subgroup had some unique characteristics and social rules relating to activity, interaction, emotions and behaviour. The strength of the socialization process and the social rules and norms varied for each subgroup. Differences between subgroups included reasons for training, methods of training, reliance upon anabolic steroids, ways of dressing and the way in which they presented themselves, and the importance of some behaviour over others. The recreational users reported and demonstrated the least strong social rules, norms and sense of belonging while the doormen (bouncers/crowd controllers) described, demonstrated and expected social rules to be followed. Though there were many similarities between subgroups, they often attempted to differentiate themselves by their dress, talk and actions:

The majority of them did wear that, but then you had others like myself and Stoney and John and Troy. We were all doormen, we were different. We wore a track pants and a T-shirt or sweatshirt. We were totally covered up while we were training. (Chris text units 616–620)

The hierarchy within the subculture was determined through an individual’s capacity to provide (drugs, information, other resources), their size and their success within the subgroup-related activity. It needs to be stressed that while the use of anabolic steroids did not define the subculture the act of purchasing and using an illegal substance acted as a bonding agent:

The relationship was pretty intense, and again I think that the drugs have a lot to do with that. In my experience the people I got on really well with when I was doing all the drugs, I don’t really have a lot of time for now. And I think that the only bonding agent there was the drugs. (Simon, 1161–1166)

**Manifestation of social capital**

The manifestation of social capital can be seen wherever the anabolic steroid using subgroups are applying their social norms. There is a reciprocally interactive relationship between social capital and the way subgroups interact. That is, certain subgroup norms enhanced the development of social capital, which in turn reinforced the subgroup interaction and the subgroup norms. These include shared norms (related to drug use, training, interaction with non-users), shared activity, a sense of obligation, sense of belonging, high social interaction, social trust and social reciprocity.

The nature of the social capital experienced by new users varied, depending upon the subgroup entered. The body image users and occasional recreational users did not display or report the same levels of social capital as was evident in the other subgroups such as bodybuilders and occupational users. Loyalty, social trust and obligation between doormen were reported and observed to be very high. This is consistent with the observational studies by Monaghan [55, 56] who identified body capital, bodybuild and body techniques as other factors contributing to the functioning and status an individual held within the group. This group, more than the others, had explicit expectations of behaviours that were designed to keep individuals and their colleagues safe during work. Activities such as the telling of altercation stories while socializing and training together were other ways social capital was reinforced. The groups and individuals that reported feelings of belonging and demonstrated obligation, high social interaction and social trust indicated that there was strong enforcement of the social norms with those breaking the norms facing censure and possible physical retribution. Examples included not backing up a colleague when violence erupted (resulting in the person who broke the norm leaving the doorman industry), not turning up for training (resulting in arguments and potential loss of training partner) and informing on a supplier. This individual was threatened with physical violence and eventually left the state.

The following sections describe how the factors of obligation, belonging, social interaction, social trust and reciprocation are evident in the illegal anabolic steroid distribution network. A discussion of information channels has been presented elsewhere [42].
Sense of obligation and belonging
The sense of obligation and belonging starts before a new user enters the anabolic steroid using network [42]. When a new weight trainer enters a gym, they encounter a subculture where there are rules of entry and hierarchy. It was evident that before becoming accepted there was a need to become known and verified:

The first couple of years I trained with powerlifters. I think that I was fortunate because I got in with the right people at the right time. There was (name removed) world champion of (data removed) years in a row. Within 6 months I was his training partner, I went straight to the core as it were. They sort of bragging about what they take and they always had a bag full of bloody mix of funny things. That’s the gym where I got my education from. (Jay, text units 63–67, 795–797)

Anabolic steroid users saw themselves as part of an ‘in-crowd’ with clear rules and rituals of entry into the group. New users were taught how to train, walk, speak and eat properly. The quote from Chris provides some insight into how this happens and how obligation and belonging are created:

To the young guys the bigger you are the higher you are, but then it is like a pack, we are like animals .... There is a pecking order. When one of the older guys retires from the scene another one moves up. Even the young ones compete. Not so much confrontations, but they get bigger and have their own following, it is all about following and groupies. Then the older guy would start noticing the younger guy ... because they started looking good, and there would be a bit of respect and then he lets him into his circle. There is a pattern here. There is a behavior pattern here. (Chris text units 537–553)

Among anabolic steroid users, there were strong informal communication networks through which information was shared and anabolic steroids were purchased. These networks were primarily friendship based, though often the friendships were built up over time as obligations accrued and included gym instructors, successful bodybuilders and private trainers. The provision of information and the socialization process contribute to both the development of obligation, which manifests in a sense of ‘I owe’, and the sense of belonging. Usually the person most responsible for teaching new users how to administer the drug was the distributor. The anabolic steroid distributor/dealer consistently not only supplied the drugs but also acted as a mentor. The dealer or distributor often played the prophet role, foretelling how things were likely to be and the problems that could be faced in the future. The older experienced men were seen as resources, people who have learnt from their mistakes. All the top dealers had used >40 different brands of anabolic steroids, with one dealer identifying 63 different anabolic steroids he had consumed in his 18 years of use.

The revealing of personal anecdotes further enhanced the sense of belonging as it allowed new users to see the ‘backstage’ behaviour and experience of more experienced users [49]. This displaying of backstage experience symbolized the shift from outsider to insider for the new user. Even when new users experienced adverse physical events they nearly always rationalized the misinformation and maintained the relationship with the supplier:

Yes, one thing about Allan is that when he took us on he was very careful to explain the safety aspect of it, and the problems he had had in the past, from making certain mistakes. Unless we wanted some grief we were well advised to follow his advice and not to do the same.

But wasn’t he the one who got you the testosterone? The drug that caused your bitch tit?

Well again he was on an awful lot of stuff, had a lot to remember and not everyone is the same, so he is saying what he believes. All of the people who I have talked to believe in what they are doing. In fact Allan stated very clearly if they put all the money they put into trying to stamp
it out into refining it they would have especially on the dosage side of it a very safe drug now. A very safe drug. (Sam aged 32 text units 158–167)

The act of administering anabolic steroids often reinforced the sense of belonging. Many anabolic steroid users reported having been injected by someone else. Those sharing in the injecting act include dealers/distributors, girlfriends and training partners. The researcher observed a number of mutual injection sessions and this was reportedly a common act among new users. It should be noted that while sharing of needles was not reported to the researcher, users did report sharing vials (which could result in diseases such as Hepatitis C being transmitted) and several cases of skin infections and the development of abscesses (as a result of poor injecting technique) were reported by a number of the interviewed subjects.

Once the effects of the drug use and weight training began to manifest, they were reinforced through a socialization process that rewarded increased size with compliments and a further sense of belonging. This further enhanced the innate rewards the users felt while gaining size and strength. For those in the subculture there was strong sense of belonging to a superior physical group:

Once you are a body builder, other body builders just accept you. They look at you as a world above everyone else. Even if they like you or they don’t, you tend to get into clubs free, they give you the nod, if some one walks into the gym they have more respect for you. (Mark, text units 264–270)

When you are training and on the gear, you get respect, you are part of the group, you are fucking strong and this gets you in. (Chris, text units 343–345)

High social interaction

While the gym was a main focal point, individuals within various subgroups often socialized outside this environment. Body image users went clubbing together, strippers met at the nude beach, bouncers congregated for drinks after work, bodybuilders often socialized, trained and ate with the same individuals. The social interaction among members of the subgroups extended further than just the gym, with some going on holidays together, as well as to parties, restaurants and social outings. There was significant social interaction between individuals, with people living, training, eating, playing, working and socializing together. Individuals reported days and weeks spent training, eating, socializing and working with the same individuals.

The following quote illustrates the social interaction that exists between training partners:

Training partners is a funny thing, because you really do get sort of fairly close to your training partner because you are so involved in the gym. It becomes your whole life, so your training is your whole life and so your training partner is like, it sounds terrible, a wife almost. You get really upset when they don’t turn up on time, I remember with some training partners you could make a whole day of it, you would train in the morning, stagger home and eat until you could eat no more, I remember we would have morning tea at my place and then if we were going to train twice that day we would go back to the gym, and then go to his place, and eat more, until we could eat no more, it was just like that. (Hulk text units 686–702)

The sharing of common goals, the interaction and the act of using an illegal drug all contributed to the social bonding by creating social obligation, sense of belonging and mutual trust.

Social trust and reciprocation

The acts of the purchasing and injecting anabolic steroids further enhanced the sense of belonging. These social acts further created strong social bonds between the individuals in the group. Within the subgroups, there was a high degree of social trust and an understanding of obligation, which has been accrued through the purchase of drugs and the assistance offered by suppliers. This extended even to the recreational users. The sense of obligation created a social reciprocity between individuals, which
was further enhanced by the symbiotic relationship between naive users, experienced users and dealers. The dealers received financial and social status rewards while the user received information, drugs and a sense of belonging.

On several occasions, dealers sponsored public events related to the bodybuilding and fitness industry and even supplied personal sponsorship to individuals to assist them to travel and compete overseas and interstate. This further reinforced their positions within the network and their reputations.

The anabolic steroid supplier consistently not only supplied the drugs but also acted as a mentor. They often injected the new users, taught them how to inject themselves, where to get needles and swabs, what to expect from the drug and how to avoid detection and deal with public suspicion. These processes built up social trust and the sense of obligation:

They would come to my house … we would go out and show them how to buy the medi swabs, which gauge needles to buy .... (Hulk mid-level dealer aged 25)

Invariably the dealer or distributor played a significant role in the new user’s drug using habit and helped them overcome the barriers to use. This included how to handle social stigma, assess risk, fear of negative health consequences and of injecting. Often dealers suggested other ways of minimizing the potential harms. These included using written records, external monitoring, advice on which drugs to combine and which ones were more likely to cause problems, avoiding areas or situations where they could be ridiculed and dressing to conceal their size. The anabolic steroid dealer/distributor held significant positions within the network and in all cases they were responsible for the initial drug selection of new users.

Social trust was also developed through the support others within the group provided to the public presentation of image. The strength of the performances by anabolic steroid users varied depending upon the subgroup. For example, some groups of users presented images of self that could be characterized as ‘hard man/bad man’ or ‘white knights’ [40]. For the doormen and security workers, it was about projecting physical competence; for the power lifters, it was about projecting the image of brute strength; for the sex workers or gay men using for body image reasons, it was about the presentation of a natural healthy look. For bodybuilders, it was about projecting their muscles, size and shape. Others in the social groups supported these performances. Bouncers built up the physical prowess of their colleagues, bodybuilders flexed with others in apparent casual detached inspections of their products. These performances enhanced individual’s feelings of belonging. Within this process of cooperative image projection, there was also the careful management of the negative aspects of the side effects. For example, users rarely talked to those not involved with the subgroup about the problems they were facing. Emotions were managed and there were rules relating to the expression of emotions within subgroups.

The socialization process in the anabolic steroid using subculture relied upon the constructs of belonging, high social interaction, social trust and social reciprocity. The anabolic steroid dealers contributed to the subculture through the processes of mentoring, supplying, socializing and educating. The sharing of an illegal act and the social reciprocity that this developed appeared to enhance the social bonds and sense of obligation. The sense of obligation and social reciprocity helped support individuals in the subgroups and contributed to the continuance of their drug use. It also made any attempts to move away from the subgroups difficult.

**Summary and conclusions**

This research has described the form and function of social capital, as it existed in a group of West Australian drug users in a hypermasculine environment. It has demonstrated that social capital within the illegal anabolic steroid network helped facilitate the distribution of illegal anabolic steroids, entry into illegal drug use, reinforced continuation of that drug use and inhibited cessation. The subculture of the dealing network introduced new users to the
drug and provided the users with the skills and resources to overcome the social controls which may have inhibited or reduced use.

The anabolic steroid using subculture relied upon the constructs of belonging, social interaction, trust and reciprocity and actively reinforced them. Dealers via the processes of mentoring, supplying, socializing and educating contributed to the development of social capital. The sharing of an illegal act, the obligations accrued and the bonds created appear to further enhance social capital.

For this study, the concept of social capital proved a useful tool and perspective to investigate the activity of an illegal subculture. The researchers were able to gain greater understanding about the operations of an illegal phenomenon. It is unlikely that a single surrogate measure of social capital would have provided any assistance in understanding these phenomena.

Using Coleman’s perspective of social capital, it became evident that the semi-closed system that the observations and interviews took place in did help facilitate not only the obligations, expectations and social norms as predicted by Coleman [2] but also the information channels most utilized and believed by the anabolic steroid users [42].

This paper illustrates that social capital may exist in unusual settings, and may influence behaviours we do not consider ideal. This research has demonstrated that the existence of social capital may facilitate entry into illicit drug use, enhance the experience of taking an illegal drug and reduce the risk of detection. Participants in the study also cited cases of impaired health, violence and other risk-taking behaviours. To view social capital as an instrumental and/or a terminal social construct always conducive to good health is naive and simplistic. Health practitioners need to remember that social capital that may enhance both negative and positive behaviours. Depending upon the context, the factors of belonging, cohesion, reciprocity, etc. may not contribute to health enhancement. As such this paper identifies that social capital is not as Cox [23] defined it ‘factor which allows collective action … for the common good’, rather it is a non-discriminatory concept and a multi-directional phenomenon, residing in individual and collective relationships, which may or may not contribute to common good.

Conflict of interest statement

None declared.

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