

## Psychological profile of Slovene bodybuilders

MANCA FAGANEL and MATEJ TUŠAK

The aim of the research was to determine personality profile of Slovene bodybuilders. In this study we compared a group of 31 Slovene bodybuilders (31.6 %), a group of 36 Slovene elite individual athletes (36.7 %) and a group of 31 non-athletes (31.6 %). The following inventories were used: Personality questionnaire FPI 114, Tennessee scale of self-image and Athletic Identity Measurement Scale. Some significant differences were found among these participants. Bodybuilders scored lower on depression, irritability, suppression, sincerity and emotional instability. They also showed higher self-esteem scores (physical self, moral-ethical, personal and social self, they have a stronger identity, self-image, higher perceptions of suitability of behavior) than other elite athletes and non-athletes. Family self was well expressed in both groups of athletes. Bodybuilders described themselves as less honest and less critical about themselves, which attributes them a defensive orientation and probably protects from criticism and feelings of inferiority.

*Key words:* bodybuilding, athletes, self-esteem, body image, athletic identity, personality

Bodybuilding is becoming more widespread and popular. Intense and painful practices, strict diets, artificial substances and relatively poorly developed competitive system suggest that the population of bodybuilders must be different to all others athletes. Could it be said that involvement in bodybuilding changes human personality? Bodybuilding is a sport where an athlete is lifting up weights and, consequently, building up the body. The goal of bodybuilding is to obtain as much quality body mass, strength and physical fitness as possible (Perkov, 2000) and to obtain symmetrically developed muscles and the whole body conformity (Frederick, 1984). It is focused on building, consolidating and strengthening muscles, and that demands a high level of discipline and devotion. Bodybuilding is known and described as a typically male sport (Perkov, 2000), because female competitions are not well developed. Some researchers believe that bodybuilding will never develop as a female sport, because extremely masculine female bodies are simply not aesthetic (Roussel, Griffet, & Durret, 2003). White and Gillet claim that bodybuilding developed as a normal consequence to the masculinity crisis (as cited in Wiegers, 1998). A mesomorphic body type is culturally known to be strong and competitive, with a good control of the environ-

ment. Bodybuilders pursue a hypermasculine self-identity by shaping their bodies so resemble muscular mesomorphy. Therefore, bodybuilders have wide chest and arm muscles and wide shoulders tapering down to a narrow waist. A mesomorphic body is tied to a cultural idea that masculinity embodies power, strength, competence and control of the environment. This might be why bodybuilders tend to develop hypermasculine identity. Bodybuilding dates back to 1921 when Charles Atlas in New York City won his first major title "The World's Most Perfectly Developed Man". In Europe it became popular much later, around 1970, with the arrival of the fitness industry (Wiegers, 1998). Today bodybuilding is considered the best additional training in all kinds of sports (Ravelle, 1959). Also, it is becoming increasingly acceptable. This acceptance can be witnessed through the astounding growth of interest in bodybuilding during the past decade. Many athletes do unimaginable things to improve their scores or to achieve a certain goal. That's why it is not surprising that extreme behaviors are common among bodybuilders and other athletes (Thompson, 1990). In the past, bodybuilders have been condemned and attacked because of the forbidden dope use.

Nowadays young men are becoming as concerned with their physical appearance as young women are. Women are trying to achieve a slim bodyline; men want to enlarge their muscle mass and body size. Like women with anorexia nervosa, competitive bodybuilders try to "help themselves" with extreme behaviors. Namely, they use diets with rigorous food restrictions, immoderate physical activity and illicit dietary supplements just to attain their goals. Davis

Manca Faganel, University of Ljubljana, Faculty of sport, Gortanova 22, 1000 Ljubljana, Slovenia. E-mail: manca.faganel@sp.uni-lj.si (the address for correspondence);

Matej Tušak, University of Ljubljana, Faculty of sport, Gortanova 22, 1000 Ljubljana, Slovenia. E-mail: matej.tusak@sp.uni-lj.si.

and Scott-Robertson (2000) found psychological profiles of bodybuilders to be similar to psychological profiles of girls with anorexia nervosa. Both groups have more obsessive tendencies, higher levels of perfectionism, anhedonism and pathological narcissism than general population does. There is a difference in self-image between these groups; while bodybuilders had a very positive self-image, girls with anorexia nervosa had a negative self-image. Schwerin, Corcoran and Fisher (1996) compared the self-image of bodybuilders with anabolic steroid use, bodybuilders who never tried anabolic steroids, other athletes and non-athletes. The most positive body-image was found with bodybuilders who have used anabolic steroids. Investigation of the possible connection between bodybuilders' body image and steroid use showed that male bodybuilders represent the highest risk group to develop image disturbances and other symptoms, which are common in individuals with eating disorders (Blouin & Goldfield, 1995). Goldfield, Harper and Blouin (1998) found that women in bodybuilding have a negative body image and represent a risk group for developing eating disorders.

The self as a part of personality has been a research topic in personality and clinical psychology for several decades. Recent developments in sport psychology have shown that the topic of identity, specifically athletic identity, should be considered in more detail. The need to study athletic identity is seen through the growth of athletic achievements, widening of the realms of what seemed possible and a typical development of a specific athletic personality (Tušak & Tušak, 1997). Athletic identity can be defined as a level to which one identifies with the role of an athlete (Van Raalte, Brewer, Brewer, & Lindner, 1992). Athletic identity is a part of self-identity that enables value and meaning through taking part in exercises and competing.

Bodybuilding is a sport that demands full commitment and discipline (painful practices, strict and expensive dietary control, everyday planning and measuring the food intake). Bodybuilders endure such harsh conditions in order to achieve their primary sport goal - to build-up their body. Because of such a high concern for their physical appearance, we tried to discover whether involvement in bodybuilding is related to one's personality.

In this research, we tried to identify personality and self-esteem of bodybuilders in relation to other top athletes and non-athletes. We therefore formed the null hypotheses, assuming that there are no statistically significant differences between bodybuilders, other athletes and non-athletes in their personality characteristics ( $H_{01}$ ). We also checked alternative hypotheses presuming that bodybuilders have higher self-esteem (especially body image) than other athletes and non-athletes ( $H_{02}$ ). Finally, we formed the null hypotheses assuming that on the basis of personality characteristics, self-esteem and athletic identity can not differentiate bodybuilders from elite athletes and non-athletes ( $H_{03}$ ).

## METHOD

### *Participants*

The sample included 31 Slovene bodybuilders (members of Slovenian bodybuilding and fitness organization from ten different fitness centers all over Slovenia; average age was 27.4 years;  $SD = 1.70$ ), 36 elite Slovene individual athletes categorized with respect to the categorization of the Slovenian Olympic committee (all were top level athletes, but from different disciplines: kayak, swimming, tennis, table tennis, badminton, squash, alpine skiing, snowboarding, cycling, athletics, gymnastics, judo and paragliding; average age was 25.8 years;  $SD = 3.37$ ) and 31 non-athletes (the criteria for non-athlete was not more than half an hour of sport activity per week; average age was 26.8 years;  $SD = 1.94$ ). All participants were males, of similar age and level of education.

### *Measures*

We measured personality characteristics with a *Slovene version of Freiburger Persönlichkeitsinventar FPI 114* (Bele-Potočnik, Hruševar, & Tušak, 1990). We chose this questionnaire because it measures 9 different primary dimensions of personality (neuroticism, impulsivity, depression, irritability, sociability, calmness, dominance, suppression and sincerity; Cronbach  $\alpha$  for each separate characteristics is higher than .70). It also measures 3 second-order personality characteristics (extraversion, emotional instability and masculinity). It includes 114 statements with a yes/no answer format. Timm (1970, as cited in Bele-Potočnik et al., 1990) confirmed the validity of the questionnaire by evaluating different forms of manifested behaviours.

For the measurement of self-image, we used the *Tennessee scale of the self-concept* (TSCS; Fitts, 1965, as cited in Tušak & Tušak, 1997). The scale was standardized on 626 participants, aged 12-68. Test-retest reliability in the two week period was .92 and .75, for the positive scale and self-criticism, respectively. The scale was validated on a healthy (nonpsychiatric) Slovenian sample and in different psychiatric groups, where some statistically significant differences were shown (Lamovec, 1994).

TSCS measures dimensions of positive and negative self-concept. Negative self-concept was measured by the scale of *Self-criticism*, which expresses one's relatively undesired characteristics that he/she acknowledges. Person denying them has a stronger defensive orientation. The variables of the positive scale of self-concept are as follows: *Physical self* (expresses one's opinion about his or her body, abilities and sex life); *Moral-ethical self* (expresses the moral-ethical frame); *Personality self* (reflects the feelings of one's own worth when compared to others); *Family self* (reflects one's

feelings of adequacy, worth and recognition in the family); *Social self* (reflects the feelings of suitability and worth in social interaction with people in general); *Identity* (shows the perception of oneself as one sees oneself); *Self-image* (shows one's acceptance of oneself); *Behavior* (expresses the subject's perception of the suitability of behavior and manner of action); *Self-evaluation* (represents the aspect of evaluation of oneself, the aspect of self-esteem).

We also administered *Athletic Identity Measurement Scale* (AIMS; Brewer, Van Raalte, & Linder, 1993, as cited in Van Raalte et al., 1992) to measure athletic identity. It is a 10-item Likert type scale with answers 1-7. The score of athletic identity is the sum of answers on all the items. Exploratory factor analyses yielded one factor explaining more than 60% of the total variability. AIMS had a high test-retest reliability ( $r = .89$  after 14 days) and internal consistency measures ( $\alpha = .81 - .93$ ). Construct validity was confirmed on a sample of psychology students, where statistically significant and high correlations were obtained between AIMS and Perceived Importance Profile (PIP) (Fox, 1987, as cited in Brewer et al., 1993), that measures importance of sport competence, importance of physical activity and the importance of attractive body and physical strength.

#### Procedure

We administered all instruments in the group of non-athletes, elite athletes and bodybuilders. We administered personality inventory to Slovene bodybuilders in different fitness centers all over Slovenia right after they finished their daily practice. The data were analyzed by the statistical package for social sciences (SPSS 11.0). One way ANOVA and discriminant analysis were used to distinguish the groups of bodybuilders, elite athletes and non-athletes. We used Enter independent together method (all groups together).

## RESULTS

Personality characteristics which differentiate 3 measured groups were depression, irritability, suppression, sincerity and emotional instability (Table 1). Our results implicate that bodybuilders describe themselves as less suppressed, less sincere and more emotionally instable than other athletes or non-athletes. They are also less depressed than non-athletes. Slovene bodybuilders describe themselves as anxious, without feelings of inferiority, inside directed aggression, without feelings of timidity or confusion. They describe themselves as calm and well-controlled adults able to control their own impulses and emotions. Low scores on the dimension of openness suggest that bodybuilders have a tendency to make a good impression on others. Men have a better opinion of themselves when their body is large, hard, and masculine, because they receive attention and respect

(Hülya, 2001). Although some researchers found a positive impact of bodybuilding on masculinity (Wiegers, 1998), the results of this study do not confirm the expectations of higher masculinity in bodybuilders.

On all dimensions of self-esteem, the differences between bodybuilders, other athletes and non-athletes are statistically significant (Table 2). Compared to two other groups bodybuilders have a higher body image; they also have higher moral and personal values. They perceive their own behavior in social interactions as more adequate, they are more satisfied with themselves and their own behavior, and they perceive themselves in a more positive manner.

Table 1

Statistically significant differences in personality characteristics among groups

Variable	Group	N	M	SD	F	p
Neuroticism	bodybuilders	31	3.48	2.85	1.75	.18
	athletes	36	4.67	3.37		
	nonathletes	31	4.81	2.95		
Impulsivity	bodybuilders	31	4.58	2.17	1.46	.24
	athletes	36	5.25	1.78		
	nonathletes	31	5.45	2.39		
Depression	bodybuilders	31	4.03	2.63	4.54	.01
	athletes	36	3.67	2.67		
	nonathletes	31	5.74	3.52		
Irritability	bodybuilders	31	2.52	2.14	4.44	.01
	athletes	36	3.25	1.32		
	nonathletes	31	3.90	2.01		
Sociability	bodybuilders	31	10.74	2.05	0.91	.41
	athletes	36	10.11	2.31		
	nonathletes	31	9.97	2.85		
Calmness	bodybuilders	31	6.23	1.71	0.74	.48
	athletes	36	5.75	1.93		
	nonathletes	31	5.68	2.15		
Dominance	bodybuilders	31	3.61	2.08	1.43	.24
	athletes	36	4.42	2.20		
	nonathletes	31	4.32	1.94		
Suppression	bodybuilders	31	3.00	1.88	3.26	.04
	athletes	36	3.44	1.89		
	nonathletes	31	4.19	1.82		
Sincerity	bodybuilders	31	7.26	3.14	4.23	.02
	athletes	36	8.33	2.16		
	nonathletes	31	9.16	2.41		
Extraversion	bodybuilders	31	8.23	1.94	0.05	0.95
	athletes	36	8.11	2.16		
	nonathletes	31	8.06	1.93		
Emotional instability	bodybuilders	31	3.71	2.37	7.18	.001
	athletes	36	4.67	2.29		
	nonathletes	31	6.10	2.83		
Masculinity	bodybuilders	31	8.81	1.87	0.58	0.56
	athletes	36	8.39	2.14		
	nonathletes	31	8.32	1.72		

Bodybuilders and top athletes both have well-expressed dimension of family self. Non-athletes value family as less important in their lives. All the differences were statistically significant. Our results support the findings of Mekolichick study (1999), where amateur bodybuilders were found to have a higher self-esteem than non-athletes. Bodybuilders perceive their body, their health status, physical appearance, and also their abilities and sex life in a more positive manner compared to non-athletes. That is understandable because the main goal in bodybuilding is to obtain comely, symmetrically developed muscles and whole body conformity (Frederick, 1984). To be an athlete you have to be harmoniously developed and feel confident in physical activities which are important factors implicating positive body image. Some other studies (Bednarek, 1985; Pasman & Thompson, 1988) are congruent to findings in our research— they have demonstrated a well-expressed body image with bodybuilders.

Moral-ethical frame which describes the relation to God, feelings about oneself, whether one is a good or a bad per-

son, and personal satisfaction with the presence or absence of faith is well expressed in the group of bodybuilders. They probably generalize their success in constructing a well-formed body from thinking “I am good in sport” to the idea “I am a good person”. Bodybuilders describe themselves as suitable for and worthy of social interaction, which can also be seen in higher values of their personality self. They find it important to be approved and identified by the society and they have a feeling of personal adequacy in relation to wider circle of people. Also the narrower social circle, their family, accepts and appraises them. Bodybuilders and other athletes find their families and their support very important. It might be that the high support bodybuilders receive from their family is due to the fact that their appearance represents typically desired male characteristics: boldness, dominance and independence (Musek, 1995). Sex role is one of the most important ingredients of identity and self-esteem and it has a strong impact on one’s behavior and life roles. Traditional male and female roles are now changing. Women are leveling up with men in economical independency and social power (Musek, 1995). Mesomorphic body is culturally seen as strong and competitive, having a good balance and control of the environment (Wiegers, 1998). This might be why bodybuilders tend to form a hypermasculine identity and, therefore, a narrow and rigid sex role. By forming a masculine body, they try to present themselves as active, independent, supervising and dominant. This study also shows that when bodybuilders describe themselves, variables of the internal reference frame (identity, behavior, self-image) are highly expressed. We can talk about a high level of general self-respect. Phenomenological classification of attitudes includes three primary sets of information: *that is me* (identity), *that’s what I think of myself* (self-image) and *that’s what I do* (behavior). Bodybuilders appreciate themselves more than other athletes or non-athletes, they trust themselves and they know that other people think the same of them. Therefore, bodybuilders behave and act self-sufficiently. Compared to other two groups they know who they are. They are completely identified with the socially expected male role: active, hard, aggressive. The identification with the role is so powerful because this role emphasizes masculinity. Surprisingly, our analysis of personality characteristics did not confirm any differences in masculinity between bodybuilders, other athletes, and non-athletes. Maybe bodybuilders wish to please the demand of social surroundings and, therefore, form an “ideal” self, which can contradict their “private” self and, thus, cause conflicts. Rogers suggests (Musek, 1999) that it is very important to form an image of yourself that is congruent to one’s real nature. When an image of you is not harmonious with your actual characteristics, those characteristics are repressed. A person tries to disown and deny those characteristics to others and to oneself. Bodybuilders disown those characteristics by being less critical towards them. For bodybuilders it is important that they make a good impression to others, which

Table 2

Statistically significant differences in self-esteem among groups

Variable	Group	N	M	SD	F	p
Self-criticism	bodybuilders	31	29.48	5.29	12.07	.001
	athletes	36	35.25	3.64		
	nonathletes	31	32.32	5.42		
Physical self	bodybuilders	31	78.03	6.72	12.21	.001
	athletes	36	75.00	8.89		
	nonathletes	31	68.13	8.42		
Moral-ethical self	bodybuilders	31	73.90	6.58	9.31	.001
	athletes	36	72.53	7.27		
	nonathletes	31	66.13	8.87		
Personal-self	bodybuilders	31	76.42	6.77	9.90	.001
	athletes	36	73.42	7.90		
	nonathletes	31	67.29	9.84		
Family-self	bodybuilders	31	73.97	7.77	4.19	.02
	athletes	36	74.78	7.43		
	nonathletes	31	68.94	10.90		
Social-self	bodybuilders	31	73.06	7.83	5.36	.01
	athletes	36	70.25	6.04		
	nonathletes	31	67.03	7.95		
Identity	bodybuilders	31	129.03	8.67	7.49	.001
	athletes	36	124.83	11.81		
	nonathletes	31	117.58	14.26		
Self- image	bodybuilders	31	124.03	12.21	6.87	.001
	athletes	36	122.47	12.14		
	nonathletes	31	112.52	15.65		
Behavior	bodybuilders	31	122.32	11.98	11.84	.001
	athletes	36	118.67	11.00		
	nonathletes	31	104.23	21.98		
Self evaluation	bodybuilders	31	375.39	28.85	10.50	.001
	athletes	36	365.47	31.28		
	nonathletes	31	337.61	40.47		

Table 3  
Main results of the canonical discriminant analysis

Function	Eigen value	% variance	Cumulative %	Canonical correlation	Wilks lambda	chi-square	<i>p</i>
1	2.34	71.85	71.85	0.84	0.16	156.00	.001
2	0.92	28.15	100.00	0.69	0.52	54.67	.001

is confirmed by results of this study. Bodybuilders are less sincere and less critical about themselves than other athletes and non-athletes. Their evaluative self is highly expressed which is also congruent with research (Glassner, as cited in Wieggers, 1998) showing a positive impact of involvement in bodybuilding on self-esteem. Musek (1999) says that self-esteem has a directive function. All the ideas that we have about ourselves have a strong influence on our behavior. Bodybuilders' positive ideas influence their personality and, therefore, direct their reactions in the social environment. Moreover, as we have mentioned, environment identifies bodybuilders as self-confident. This is reflexive information about their suitability. That is why bodybuilders are constantly confirming their high self-esteem and self-respect.

Based on lower scores on honesty and criticism towards themselves we can conclude that bodybuilders form a defensive orientation, and such results are stated in the literature (Waler Loland, 1999). Bodybuilders have a strong desire to have large body, to be strong and socially accepted. They protect themselves against criticism and disapproval. Maybe they engage in bodybuilding to insure themselves against their own vulnerability. Klein (1995, as cited in Hitt, 2001) describes bodybuilders as neurotically insecure. He finds them engaged in a fertile search for a hypermasculine body image. Bodybuilders are depicted as experiencing feelings of inferiority, lacking masculinity and displaying narcissistic and homosexual tendencies. Klein believes bodybuilders protect themselves, because they feel inner emptiness, which is why they try to form a mighty appearance. Also, Pleck (1995, as cited in Hülya, 2001) argues that bodybuilding is an archetypical expression of jeopardized male identity. Bodybuilders with their openness and interaction with the environment gain positive self-esteem and, therefore, gain approval and recognition. Also, researches show that participants with high self-esteem tend to seek self-verifying responses (Bernichon, Cook, & Brown, 2003). We often speak of bodybuilders' egocentrism and individualism (Sprague, 1983, as cited in Klein, 1985). In one of his studies, he confirmed their self-sufficiency and group independence in relation to other athletes. However, probably it is all about improving or satisfying their needs to be appreciated and socially accepted as strong and independent individuals.

Because of statistically significant differences between groups on dimension of depression, irritability, suppression,

Table 4  
The structure matrix of two discriminant functions

variable	function	
	1	2
Athletic identity	<b>0.69</b>	0.10
Behavior	<b>0.32</b>	-0.11
Physical self	<b>0.31</b>	-0.17
Self evaluation	<b>0.30</b>	-0.13
Moral-ethical self	<b>0.29</b>	-0.08
Personal self	<b>0.28</b>	-0.16
Self- image	0.25	-0.05
Identity	0.24	-0.16
Emotional instability	-0.23	0.17
Depression	-0.20	-0.05
Family-self	0.19	0.04
Social-self	0.19	-0.17
Suppression	-0.16	0.11
Self-criticism	0.02	<b>0.53</b>
Sincerity	-0.16	0.18
Irritability	-0.17	0.18
Dominance	-0.04	0.17
Neuroticism	-0.07	0.17
Impulsivity	-0.07	0.14
Sociability	0.06	-0.12
Calmness	0.05	-0.11
Masculinity	0.04	-0.10
Extraversion	0.02	-0.03

sincerity and emotional instability we have to reject our first hypothesis. Bodybuilders describe themselves as satisfied, calm and well-controlled individuals with a strong desire to make a good impression on others. On all other dimensions of the personality questionnaire, there were no statistically significant differences found between bodybuilders, other athletes and non-athletes. We confirmed our second hypothesis on differences in the area of self-esteem. Differences are confirmed not only on the dimension of body image, but

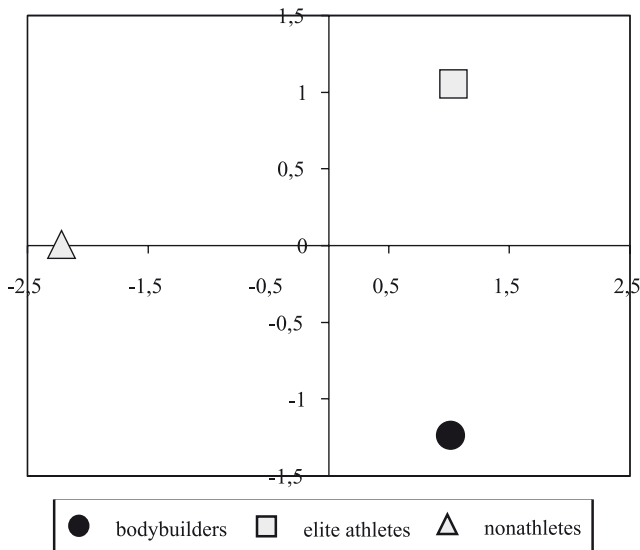


Figure 1. Discriminant analysis of personality characteristics, self-esteem and athletic identity among bodybuilders, elite athletes and nonathletes

also on all the other dimensions of self-esteem. Bodybuilders describe themselves as less honest and less critical about themselves, which gives them in a defensive orientation. Bodybuilders try to satisfy the needs of their social environment; therefore, they form an ideal image of themselves. In that way they protect themselves from criticism and feelings of inferiority.

Discriminant analysis of personality characteristics, self-esteem and athletic identity between bodybuilders, athletes and non-athletes showed that we can distinguish between these groups on the basis of two discriminant functions; therefore, we rejected the third hypothesis. The first function (axis X, Figure 1) is defined mostly by the athletic identity, and also by the variables: behavior, physical self, moral-ethical and personal self. The second function (axis Y) distinguishes those with high self-criticism and those less self-critical. Centroid values of bodybuilders and elite athletes are high on the first function; they both have strong athletic identity and self-esteem. Typical representative of non-athletes has lower scores on the first function. Non-athletes have lower self-esteem and do not identify themselves as athletes. The second discriminant function shows us, that athletes are the most self-critical, followed by non-athletes, where bodybuilders are the least self-critical.

Bodybuilders describe themselves as athletes with strong attitude on sports and sports identity. They have to follow behavior, dictated by the role. They have to satisfy the needs and expectations of the environment which has a strong impact on bodybuilders. Results of this study show that personality characteristics of bodybuilders correspond

relatively well to the personality profile of a professional athlete. The results confirmed a positive self-image, which gives them power and control of the environment. They are also provided with approval from the environment. Some research show a pattern of low self-esteem before involving in bodybuilding (Klein, 1985), which we did not control in our research. Can we talk about a healing, preventive or even (symptomatically) therapeutic effect that bodybuilding brings? Those directives are still opened, and need to be further explored. Reliable answers will need more scientific confirmations.

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