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Androgyny and depressive manifestations. Comparative study, Greece-England.

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Summary

Theoretical substantiation

The development of gender identity is an essential issue because some of the most fundamental aspects of life, such as the talents people cultivate, the conceptions to which they adhere concerning the self or others, the opportunities or constraints they encounter and their social life, as well as the occupational paths they follow are strikingly prescribed by gender stereotypes that function in society. Gender identity is the basis according to which people can be distinguished, and this has pervasive effects upon their day-to-day life. Gender differentiation acquires an even greater importance because many of the attributes and selectively promoted roles for men or women are differently valued, the masculine ones being generally seen as more desirable, more efficient and having a higher status (Bussey & Bandura, 1999).

Although some gender differences have a biological basis, the majority of the attributes and stereotype roles connected to gender have their origin rather in cultural influences (Bandura, 1986; Beall & Sternberg, 1993; Epstein, 1997).

Over time, a series of theories have been suggested in order to explain gender identity development. They differ from one another depending on several important dimensions: a) the relative accent placed on psychological, biological or socio-structural determinants; b) the nature of transmission models (e.g. cognitive construction, identification, modeling, genetic transmission, social construction etc); c) the time frame of the human development spectrum to which it refers (e.g. early childhood, adulthood, entire life).

Chronological markers in the development of the concept of gender

Age	Knowledge and perceptions based on gender
0-5 months	-
6-8 months	Discriminate female and male voices (C.L. Miller, 1983) Get accustomed to a particular category of faces (Younger & Fearing, 1999) Use hairdo to discriminate faces depending on sex; only boys (Pakizegi, 1984) Intermodal associations for dynamic exposures of sexes (Walker-Andrews et al., 1991)
9-11 months	Discriminate male and female faces (Cornell, 1974; Leinbach & Fagot, 1993) Use male/female categories simultaneously in habituation (Younger & Fearing, 1999) Intermodal associations for female faces and voices (Poulin-Dubois et al., 1998) Detect correlations between male and female faces and gender-related objects (Levy & Haaf, 1994)
12-14 months	Intermodal associations for male faces and voices (Poulin-Dubois et al., 1998)
15-17 months	-
18-20 months	Visual preferences and stereotype knowledge differentiated according to sex; only girls (Serbin et al., 2001) Recognise labels associated with faces, especially for girls (Poulin-Dubois et al., 1998) Metaphorical associations with sex (Eichstedt et al., in press)
21-23 months	-
24-26 months	Installation of non-verbal, verbal labeling of gender (26-31 months; Weinraub et al., 1984) Gender labeling (2- 2 ½ years old; Leinbach & Fagot, 1986) Receptive labeling of their own sex (24-30 months; Sen & Bauer, 2001) More time for watching activities inconsistent with gender (Serbin et al., in press) Generalized imitation differentiated according to gender; only girls (Poulin-Dubois et al., 2002) Determined imitation of gender-related sequences (25 months) boys (Bauer, 1993) Awareness concerning the category of toys related to gender (Levy, 1999)
27-29 months	Gender labeling (majority; Etaugh et al., 1989)
30-32 months	Gender labeling (Thompson, 1975) Non-verbal identity of gender (majority; Weinraub et al., 1984) Generalized imitation of masculine activities for boys (Poulin-Dubois et al., 2002)

Taking into consideration the way in which gender identity intersects with other identities such as ethnicity or class is important in order to understand the ramifications of the influence of sex differentiation upon adaptation. It is also necessary to adopt a perspective which investigates social and developmental factors relevant for the study of identity throughout life. Several studies have shown an increase concerning gender tradition in the middle of adolescence and late adolescence suggesting the fact that the intensity of sex differentiation continues to fluctuate after childhood (Crouter, Whiteman, McHale, & Osgood, 2007).

Traditionally, the sex differentiation process has been studied either from an individual perspective, either from a normative perspective, but these two perspectives have only seldom been taken into consideration together. Social psychology has focused on the documentation of individual differences in sex differentiation during adulthood (Bem, 1974). Unlike the latter, developmental psychology has focused on understanding normative modifications, especially those occurring during early childhood (Kagan, 1964; Kohlberg, 1966). Individual and normative differences are relevant, however, throughout life. For example, the impact of these differences on adaptation differs depending on the development stages. Gender identity is thus a multidimensional concept in connection with the relationship between social identity and personal adaptation. Multidimensionality may be understood in various ways, but it mainly refers to the idea that social identity reflects the knowledge of the group members, as well as a series of beliefs about belonging to the group (Ashmore, Deaux & McLaughlin-Volpe, 2004).

A variety of studies have examined the relationship between gender role orientation and aspects of psychosocial well-being. They have discovered the fact that masculinity is positively related with variables like high self esteem in women (Lamke, 1982a; Wells, 1980), better acceptance of others, and superior self-acceptance in boys (Massad, 1981), control of the external world in men and women (Wells, 1980), vocational identity in men and women (Grotevant & Thorbecke, 1982), ideological identity (Lamke & Peyton, 1988), aspects of interpersonal identity in men and women (Thorbecke & Grotevant, 1982), a greater physical competence and personal value in men and women (Cate & Sugawara, 1986), higher motivation for performance in women (Henschen et al., 1982).

Lorr & Manning (1978) have characterized masculine persons as being directive, performance oriented and independent.

High scores in femininity have been related to less aspects of psychosocial well-being than masculinity.

Femininity is associated with better social relationships both for men and women (Wells, 1980), tolerance and sensitivity (Lorr & Mannings, 1978), aspects of interpersonal identity (Lamke & Peyton, 1988; Thorbecke & Grotevant, 1982).

Androgynous persons resemble masculine ones. Androgyny is associated with high scores in self-acceptance, superior adaptation both in men and women (Wells, 1980), superior self-esteem (Lamke, 1982), high levels of identity (Grotevant & Thorbecke, 1982; Tzurile, 1984), less solitude (Avery, 1982) and motivation for performance in women (Henschen et al., 1982).

As expected, undifferentiated gender role is not associated with psychosocial well-being. The only exception was in Wells' study (1980) where undifferentiated men had higher scores in self esteem.

In the regression analysis performed, masculinity was found to be a good predictor of *control over the external environment* both in men and women (Wells, 1980), of superior adaptation in women (Wells, 1980), high scores in self esteem both in men and women (Gregson & Colley, 1986). Femininity predicts a superior adaptation and better social relationships in men (Wells, 1980) and higher self esteem in men (Lamke, 1982a). Androgyny predicts superior social relationships in women (Wells, 1980) and lower levels of solitude both in women and men (Avery, 1982).

It is very obvious from the glance at the specialized literature that neither the bipolar point of view regarding sex differentiation, neither androgyny or gender role transcendence have been entirely supported by the empiric studies as being associated with well-being in adolescents.

The studies rather support the theory of androgyny, although certain discrepancies have been observed. In some cases, androgyny is associated with psychosocial well-being both in women and men. Nevertheless, masculinity, more than femininity, is associated with positive social and psychological aspects. This discovery is interesting because it suggests that it is more acceptable that women be the ones to adopt masculine features than men to adopt feminine features. Society arrogates a higher value to masculine rather than to feminine features.

Many of the studies support the idea that masculinity and probably the masculine component of androgyny is mainly associated with the psychological well-being of adolescents. This conclusion is consistent with the results of the meta-analysis over gender roles and self esteem conducted by Whitley (1983), according to which there are three models of the relationship between gender orientation and well-being. The traditional bipolar conception about gender roles is labeled as the congruence model. The other two models are the androgyny model and masculinity model. In this latter model, psychological well-being is attributed to the masculine component of androgyny and this is what Whitley's meta-analysis claims as well.

Also, it is important to note the fact that the studies on gender roles adopt an unverified assumption. For example, *many researchers do not offer an adequate theoretical justification to link certain psychological constructs to the classification of gender roles.* It is assumed at many times that a high level of any psychological indicator of well-being should be linked to androgyny, but the motivation of this assumption is missing. It is rather unrealistic to assume that gender roles are so pervasive that they are linked to just any psychological indicator.

Another assumption is that androgyny is the most desirable gender role. But the studies show that in certain conditions masculine persons are able to evolve in a plenary manner, and feminine persons are able to excel.

Initially, developmental psychologists have defined gender identity as the extent to which a person feels masculine or feminine. This feeling was assumed to be important for children and it depended on whether they adhered to the cultural standards concerning masculinity of femininity. It was mainly believed that sex differentiation is mandatory in order to acquire a secure feeling of the self as masculine or feminine. Moreover, researchers claimed that the persons whose behavior matched the prescriptions of the role were psychologically better adapted because they fulfilled a psychological need to comply with the internalized cultural standards concerning gender. Sex differentiation was regarded not only as normal, but also as optimal, while inversed differentiation (cross-sex) was regarded as deviant and potentially dangerous for the well-being of the person (Kagan, 1964). Bem (1974, 1981), however, changed this perspective, claiming that the need to adhere to an internalized standard of the gender would promote a negative adaptation, not a positive one.

Unlike Kagan (1964), who partially arrogated the sex differentiation process to the identification with the parent of the same sex, Bem (1981) believed that sex differentiation

would result from the frequent and functional use of gender in society. Society operated distinctions regarding gender determine people to develop *gender schemes* or associative mental networks connecting certain behaviors with masculinity and others with femininity. It is believed that the content of these schemes functions like the standards people use in order to evaluate if they are adequate representations of the gender group.

Thus, for Bem, the extent to which people are differentiated indicated the extent to which they possess these schemes or they have interiorized the culturally prescribed rules regarding sex. Thus, although Bem agrees that people are motivated to adhere to interiorized cultural standards regarding gender, unlike Kagan, she believes that this tendency results from a behavioral inflexibility and is, in consequence, maladaptive. Further proofs in favor of Bem's idea that androgyny is associated with a better adaptation were mixed, so that the extent to which androgyny is beneficial for adaptation remains unclear.

Sexual orientation and androgyny

Sexual identity and its expression is a complex subject. The establishment of sexual dimensions has added another level to the description of people's sexual life. In understanding heterosexuality, homosexuality and bisexuality, two theoretical models have been suggested.

The flexibility model suggests the fact that homosexual and heterosexual responses are not mutually exclusive, but may coexist under the form of bisexual eroticism. Also, unlike the conflict model, the flexibility model allows maintaining a psychologically congruent bisexual orientation. Psychological confusion may occur, but this is not inevitable. Moreover, the flexibility model suggests the fact that bisexual identity, rather than assuming a failure in embracing or adjusting an exclusively sexual preference, is "the successful adaptation to a homosexual and heterosexual preference" (Zinik, 1985).

Flexibility is considered of central importance for health and a well-adapted personality (Bem, 1975; Leary, 1957). Flexibility has been described as "the ability to adapt one's behavior to interpersonal requirements, in a wide range of situations" (Paulhus & Martin, 1988). Besides behavioral manifestations, it was suggested that cognitive flexibility implies the ability to "break the set", to re-classify an object from an obvious category into one that is less obvious (Carter, 1985).

People who are able to build strategies concerning alternative behavioral options on the basis of situational factors are cognitively more flexible than those who only see a correct and adequate modality of behavioral response. Cognitively flexible persons are willing to try out new ways of behaving, to confront themselves with unfamiliar situations and to adapt their behavior in order to respond to the necessities imposed by the situation.

The flexibility of gender role or *androgyny* is a type of interpersonal flexibility by the fact that it presupposes the ability of juggling between gender roles as a function of situational requests. While gender differentiated persons are strongly motivated to preserve their behavior consistently with an internalized standard regarding gender role, androgynous persons are capable of remaining sensitive to the changing constraints of the situation. Bem claimed that unlike traditional gender roles, the flexibility associated to androgyny contributes to a more integrated identity of the person.

Due to the fact that homosexuals are seen as a group who violates more frequently than heterosexuals the boundaries of gender role, it would be expected that the former ones be classified as androgynous persons to a greater extent.

If homosexuals are classified more frequently as androgynous persons than other groups, then one would expect the formers to have a higher self esteem and lower scores in depression than heterosexuals, according to previous studies on androgyny.

Heterosexuals, however, have been rather categorized in traditional gender roles, which seem to give birth to a self-restricting concept, which produces a greater behavioral rigidity (Orlofsky & Windle, 1978).

Depression and Androgyny

Among all the psychiatric and clinical psychopathological semiotics notions, that of depression is the most frequently used and it includes an extremely varied clinical phenomenology, from mood swings compatible with "normal" life to psychotic manifestations, which evolve together with the disturbance of the affective state and with the striking diminution of cognitive, psychomotor and perceptive possibilities.

Therewith, depression presents a distinct sense and is differently defined according to the psychological orientation under which it is seen. Thus:

- Psychoanalysis sees depression as a diversion of aggressiveness towards the self;
- The behavioral theory considers depression a conditioning defect or a lack of learning ability, supervened after some repeated failures;
- Academic psychology appreciates depression as a cognitive disorder which determines a negative image of the self and a pessimistic, distorted vision of the world.

Depressive moods represent a qualitative change as opposed to the previous ascertainable functioning, "most of the day, almost every day" during at a minimum two weeks. It is also mentioned that this depressive mood is indicated either by subjective narration, either by observation from others.

There is a series of instruments by which depression can be assessed. The main methods are clinical interviews and scales / questionnaires. BDI-II (Beck, Steer & Brown (1996) is one of the most utilized questionnaires in the screening of depression.

The studies which have investigated the relation between androgyny and depression have revealed the fact that androgynous persons were less depressive than masculine or feminine persons. Cheng (2005) suggests the hypothesis that this fact is due to a better flexibility in utilizing the strategies for coping with stressful situations. Androgynous persons did not have a wider repertoire of strategies, but managed to vary the coping strategies in accordance with situation controllability, regardless of the gender role that had been adopted. On the other hand, masculine or feminine persons had the tendency to vary their strategies according to the gender role they played and irrespectively of the situation controllability.

Some theoretical models suggest that femininity would protect people against depression, against interpersonal stress, and masculinity would prevent depressive symptoms as a reaction to the performance-related stress. As opposed to these, the approach of the schemes of the self implies the fact that women or feminine persons are especially vulnerable to interpersonal stress, while men or masculine persons are especially vulnerable to performance-related stress.

Conversely, the masculinity model suggests the fact that masculinity, not femininity, is associated with a favorable adaptation regarding all types of negative events.

Cheng (1999) observed that both masculinity and androgyny *correlate negatively with depression.* Androgynous *coping strategies* were associated with a better well-being than instrumental strategies (Stake, 1997). In a study regarding *aggressiveness,* Sawrie et al. (1991) found that androgynous persons were *the most adapted*, being less aggressive and more assertive.

In conclusion, a variety of studies have examined the relationship between gender role orientation and the aspects of psychosocial well-being. They discovered the fact that masculinity is positively related with variables like high self esteem in women (Lamke, 1982a; Wells, 1980), better acceptance of others and superior self-acceptance in boys (Massad, 1981), external world control in men and women (Wells, 1980), vocational identity in men and women (Grotevant & Thorbecke, 1982), ideological identity (Lamke & Peyton, 1988), aspects of interpersonal identity in men and women (Thorbecke & Grotevant, 1982), a greater physical competence and a higher personal value in men and women (Cate & Sugawara, 1986), higher motivation for performance in women (Henschen et al., 1982).

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METHODOLOGY

5.1. Objectives and Hypothesis

A first objective of our study was the investigation of the factors which contribute to the variance of the scores in the *Bem Sex Role Inventory* (BSRI). In this sense, we have taken into consideration the ethnicity of the participants, the biologic sex and sexual orientation. We expect that the gender of the participants be one of the important factors, in the sense that *a bigger number of male participants will have high scores in masculinity and a bigger number of female participants will have high scores on the femininity scale*. (hypothesis 1 a) In what concerns the scores which are classified as androgyny, we assume that *there will be no significant differences between men and women regarding the number of persons categorized as androgynous* (hypothesis 1 b).

As a part of the same objective of our study we desire the investigation of the hypothesis according to which a bigger number of persons having a homosexual sexual orientation will have higher scores in androgyny, while heterosexual persons will be rather classified as masculine or feminine at the *BSRI.* (hypothesis 2)

There should not be any major difference between participants coming from the two different countries regarding the variant of the scores in androgyny (hypothesis 3).

Since after the age of 25, sexual orientation is quite steady, we do not expect significant differences regarding the number of androgynous persons within the different age categories. (hypothesis 4)

A second objective of the present study consists of investigating the relation between the previously mentioned variables (nationality, sex, sexual orientation, androgyny) and the mood of the participants, more precisely their score in depression measured with BDI-II, the well-known inventory for depression suggested by Beck and his collaborators.

Due to the fact that the majority of the studies indicate differences in the incidence of severe depression between men and women, we appreciate that these differences will manifest themselves in our study as well, women generally recording a higher incidence of depression than men. (hypothesis 5)

Moreover, we consider that there will be differences between heterosexual and homosexual persons concerning the scores in depression, in the sense that homosexuals will have higher scores than heterosexuals in this variable. (hypothesis 6)

Considering the depression prevalence rates in Greece and Great Britain stipulated in various studies, we estimate that there will be differences between the participants in our study from the two countries, in the sense that English persons will have higher scores in depression than Greeks. (hypothesis 7)

Weighting these data from the literature, we consider that there will occur differences between androgynous, masculine and feminine persons regarding the score in depression. More specifically, androgynous and masculine persons will have lower scores in depression than feminine persons. (hypothesis 8)

5.2. Participants

The participant lot was formed of 1000 persons with ages between 25 and 45 years old, randomly selected from different economic and social environments, students, employees, as well as unemployed persons, of very different professions (teachers, artists, farmers, etc) having various religious beliefs.

In the selection of the subjects with ages comprised in this interval, we considered the fact that after the age of 25 sexual orientation is already outlined. Of the 1000 participants, 500 are women and 500 men. Half of the participants are of Greek nationality, and half are English. Half of the participants are heterosexuals, as a sexual orientation, and half are homosexuals/ lesbians.

5.3. Design

The present study is a quasi-experimental one, the comparisons being made in accordance with the hypothesis postulated on the basis of the following *classifying variables*:

- country of origin (Greece, Great Britain)
- sex (male, female)
- age (25-30 years old, 31-35 years old, 36-40 years old, 41-45 years old)
- sexual orientation (heterosexuals, homosexuals).

Dependent variables: androgyny, depression

In the present paper, we proposed two major objectives: 1) the investigation of the factors underlying score variance on the *Androgyny* scale; 2) the investigation of the factors underlying the variation scores on the *Depression* scale.

In the case of the first targeted objective, we proposed to study the variation of the variable *Androgyny*, depending on the following independent variables:

- country of origin of the participants (Greece vs. Great Britain)
- sex of the subjects (female vs. male)
- type of sexual orientation (heterosexuals vs. homosexuals/bisexuals)

The design of this study is a factorial one of type 2X2X2. In other words, we have three independent variables (country of origin, sex of the subjects and type of sexual orientation). Each of these independent variables has got two modalities, thus resulting 8 study groups that will be compared.

In the case of the second targeted objective, we proposed to study the variation of the variable *Depression,* depending on*:*

- the score on the Androgyny scale
- the country of origin of the participants (Greece vs. Great Britain)
- the sex of the subjects (female vs. male)
- the type of sexual orientation (heterosexuals vs. homosexuals/bisexuals)

5.4. Instruments

In the present study we have employed the following trials:

Bem Sex Role Inventory - BSRI

In the case of the participants from Great Britain, we have applied the original version proposed by Bem, version which is applied at a large scale in this form on the British population. In the case of the Greek population, considering that there is no adaptation of the BSRI on the

Greek population, we have made a translation of the inventory proposed by Bem, for which we have made a series of statistical processing in order to verify the psychometric qualities.

Internal consistency

In the case of BSRI applied on the Greek population we obtained an α- Cronbach coefficient of 0,71 for the "masculinity" scale, 0,81 for the "femininity" scale, which indicates a good internal consistency of these scales.

Fidelity

In order to verify the fidelity of the scales, we opted for the split-half method. The correlation coefficients obtained were of 0,69 for the masculinity subscale and of 0,70 for the femininity scale, values which offer the guaranty of stability of the subjects' scores.

Beck Depression Inventory (BDI)

Compared to the original version BDI-II is a superior instrument from the point of view of validity (Dozois Dozois & Dobson, 2002).

We applied to participants from Great Britain the original version of BDI-II and BSRI which are used in this form at a large scale in this country. In the case of the participants from Greece we used a version of BDI-II and BSRI translated by the author of the present paper, considering that these two tests were not adapted to the Greek population.

Internal Consistency

We have calculated the α- Cronbach coefficient of internal consistency for the variant of the BDI-II questionnaire translated into Greek. We obtained an α- Cronbach coefficient of 0,87. We present in the table below the results of the correlation inter-item and items total score.

Fidelity

In order to verify the fidelity of the BDI-II version translated into Greek, we opted for the split-half analysis, obtaining a coefficient of correlation r=0,75.

The data presented above prove the utility of the instrument for the objectives of the present study.

5.5. Procedure

Before the administration of the trials, the participants were informed about the objective of the study and it was brought to their attention that their participation to this study is a benevolent one. The trials have been completed individually by the subjects, the operators providing supplementary explanations where the case.

PRESENTATION AND INTERPRETATION OF THE RESULTS

Of the total sample of 1000 participants, 232 have scores that situate them in the "androgynous" category, 157 in the "masculine" and 171 in the "feminine" categories. 246 of the participants are situated in the "marginal masculine" category, and 193 are situated in the "marginal feminine" category. In further processing, we totaled the marginal masculine participants with the masculine and the marginal feminine ones with the feminine, due to low frequency of the scores recorded together with taking into account other variables.

Participants have ages ranging between 25 and 45 years old. Approximately 50% belong to the 25-30 years old age group, 30% belong to the 31-35 years old age group, 17% belong to the 36-40 years old age group and the rest to the 41-45 years old age group.

In the initial studies, Bem (1975) noticed that 34% of the men and 27% of the women participating in her study were androgynous. The proportion of men with high scores in masculinity and of women with high scores in femininity was approximately identical (55% compared to 54%). Only 11% of the men had high scores in femininity and 20% of the women had high scores in masculinity.

If we analyze the results we have obtained, we can notice that they differ quite a lot from the results obtained by Bem in the '70s. Thus, a smaller percentage (22,5%) of men have high scores in androgyny and also, a much lower percentage (6,5%) have high scores in femininity. Consequently, a higher percentage of men record high scores in masculinity.

The percentage of women who record high scores in androgyny (24%) is closer to the data obtained by Bem (27%), but the number of women with high scores in masculinity is much lower (8,2%). On the other hand, the percentage of women who have high scores in femininity is over 10% higher than the one observed by Bem (54% compared to 67,8%).

The results on the two separately analyzed cultures indicate the fact that the results of the participants from Great Britain resemble more to those obtained by Bem, fact which could also be justified by the greater similarity of the British culture with the one of the United States, in comparison with the Greek culture.

The lot of participants equally comprises heterosexuals and homosexuals.

The lot of participants has been made in such a way that it allows us to control the variables *country of origin, sex* and *sexual orientation*, in order to follow mainly the effects of androgyny on score, in the variable *depression*.

The majority of the participants do not have scores that would indicate the presence of depression, having scores which indicate a possible mild depression. Very few have depression of medium or severe intensity.

Factors which influence androgyny

A first objective of our study has been the investigation of the factors which contribute to the variance of the scores in the Bem Inventory (BSRI). In this sense, we have analyzed the role of participants' culture (country of origin), the gender and sexual orientation role.

According to the first hypothesis, we expected that the gender of the participants influence the score obtained in the Bem Inventory. More precisely, we supposed as a first hypothesis that *a bigger number of participants of masculine gender will have high scores in masculinity and a bigger number of participants of feminine gender will have high scores on the femininity scale.*

Also, we supposed that *there would not be any significant differences between men and women regarding the number of persons categorized as androgynous*.

The results indicate the fact that our hypothesis was confirmed. Indeed, the χ^2 test indicates the existence of significant differences between female and male participants regarding the scores in "masculinity" and "femininity" (χ^2= 502,602, p< 0.001). A much bigger number of men have high scores on the "masculinity" scale and a significantly bigger number of women have high scores on the "femininity" scale.

If we analyze the results from the point of view of the number of participants, androgynous women or men compared to the number of participants who are not androgynous (totaling the number of feminine and masculine ones), the χ^2 test indicates that there are no significant differences between the frequency of women and men who are androgynous, which confirms our hypothesis.

As a part of the same objective of our study, we proposed to test the hypothesis according to which a bigger number of persons having a homosexual sexual orientation will have high

scores in androgyny, while heterosexual persons will rather be classified as masculine or feminine in BSRI.

A marginal significant difference was noticed between heterosexual and homosexual participants regarding the scores on the androgyny scale (χ^2= 5, 19, p< 0,07). A bigger number of persons of homosexual orientation (G) have high scores in androgyny and masculinity compared to the ones of heterosexual orientation (H) and a bigger number of heterosexual persons have high scores on the femininity scale compared to persons of homosexual orientation.

Our results are convergent with the ones obtained by other authors (Carlston & baxter, 1984; Orlofsky & Windle, 1978 or Zoccali & co, 2008) who have remarked the fact that homosexual persons are prevalently characterized as androgynous, having high scores both in masculinity and femininity. This is explained by the respective authors by the fact that probably homosexual sexual orientation leads to a change of the masculine/feminine role and to the adoption of some of the features of the opposite sex.

Heterosexual persons are rather characterized in the traditional gender roles, fact which is considered by a series of authors as a stiffening of the behavior associated to gender role. This stiffening seems to be the explanation offered also for demonstrating certain adaptation difficulties which androgynous homosexual persons deal with better because they have a certain behavioral flexibility regarding the strategies for coping with typically feminine or typically masculine problematic situations.

Concerning the differences induced by the cultures to which the participants belong, we did not expect major differences between participants coming from the two different countries regarding the variance of the scores in androgyny.

The results show that there is a significant difference between the scores in the Bem Inventory among participants coming from the two countries (t=2,129, p<0,03).

If we analyze the data from the point of view of gender identity categories, the differences between participants coming from the two cultures are not significant (χ^2= 4, 03, NS). Thus, there are no significant differences between the two cultures regarding the frequency of androgynous, masculine and feminine persons, which supports our hypothesis.

Concerning the age of the participants, we assumed there would be no significant differences regarding the number of androgynous persons within the different age categories.

There were no significant differences between the studied age categories and the scores in androgyny.

The Factors which Influence Depression

The second objective of this study consisted of the investigation of the relation between the mentioned variables (nationality, gender, sexual orientation and androgyny) and the mood of the participants, more precisely their score in depression measured with BDI-II, the well-known inventory of depression suggested by Beck and his collaborators.

A first variable which was investigated was the gender of the participants.

There were no significant differences between men and women regarding the scores in BDI. These results seem to refute our hypothesis, but if we analyze the data from the perspective of the severity of the depression we notice that the majority of the participants in our study do not have a score in BDI-II which would indicate the presence of depression. The differences stipulated in the literature between women and men refer to severe depression, but the data we possess do not allow an analysis of the differences between male and female participants regarding severe depression.

Furthermore, we assumed that there would be differences between heterosexual and homosexual persons regarding the scores in depression, in the sense that homosexuals will have higher scores than heterosexuals in this variable.

There were no significant differences between heterosexual and homosexual persons regarding the scores in BDI. These results contradict our hypothesis. We may try to explain the absence of differences between heterosexual and homosexual persons by the fact that, actually, the majority of the participants have not recorded high scores in depression, 87% having scores that indicate the absence of depression or a mild depression. It is probable that the presence in our sample of a comparative number of participants with medium and severe depression would have modified these results.

Further, we have analyzed the differences regarding the scores in BDI-II depending on the country of origin of the participants.

In rapport with these variables, we estimated that there would be differences between the participants in our study from the two countries, in the sense that English persons will have higher scores in depression than Greeks.

There was a significant difference between Greek and English participants regarding the score on the depression scale, English persons being significantly more depressive than Greeks ($t=2,269$, $p<0,02$).

There were no significant differences between the persons belonging to the different age categories regarding the scores in BDI.

Weighting the data from the specialized literature, we considered that there would be differences between androgynous, masculine and feminine persons regarding the score in depression. More precisely, androgynous and masculine persons will have lower scores in depression than feminine ones. Adopting this hypothesis, we adhere to the model of masculinity which states that those characteristics associated with masculinity are in fact the ones that contribute to a better adaptation of the androgynous persons to the environment, these being characteristics approved and valued by society more than the feminine ones.

Analysis of the factors underlying the variance of scores on the *Androgyny* scale

Statistical analysis has been conducted through factorial analysis of variance (factorial ANOVA). In contrast with the analysis using t tests (which imply the separate comparison of androgyny depending on each independent variable in turn), factorial ANOVA allows the study of the interactions between these independent variables.

The analysis has identified significant differences depending on the country of origin ($F(1,999) = 6.668$, $p = .01$), on the gender of the participants ($F(1,999) = 919.458$, $p = < .001$). Furthermore, androgyny is influenced by the interaction between the gender and sexual orientation of the participants ($F(1,999) = 16.971$, $p < .001$). All these results have an acceptable statistical strength (above 70) which indicates the fact that they did not appear accidentally.

If we analyze these results from the point of view of the proportion of the effect (partial η^2), we can observe that the only effect worth considering is represented by the effect induced by the gender of the participants. According to this indicator, 48,1% of the dispersion of the variable *androgyny* may be attributed to the independent variable *Gender.* According to the results

presented in Table 6.26, men have recorded an average of 15,71 (SD = 15,89) and women have recorded an average of 14,4 (SD = 15,76).

Concerning the other two significant results, they are not very relevant from the point of view of the proportion of the effect. Thus, the significant differences noticed between Greek and English participants explains the dispersion of the variable *androgyny* only in a proportion of 0,7%. The results presented in Table 6.26 have indicated the fact that the average of the Greek participants was of 2.47 (SD = 20.84), and the average of the participants from the UK was of 0.47 (SD = 22.72). Although significant, this effect is much too small to conclusion that between the two cultures there are major differences from the point of view of androgyny.

The variance analysis has identified a significant interaction effect between the gender and the sexual orientation of the participants. Although significant, this effect only involves 1,7% of the dispersion of the variable *androgyny*. As one may observe from the figure below, heterosexual men record slightly higher scores than homosexual men. At the same time, heterosexual women record slightly lower scores than homosexual women.

Analysis of the factors underlying score variance on the *Depression* scale

Statistical analysis has been done by factorial covariance analysis (factorial ANCOVA). Unlike the analysis using t tests (which imply a separate comparison of androgyny depending on each independent variable in turn), factorial ANCOVA allows the study of the interaction between these independent variables and taking into consideration a covariate variable (in this case, the score of the Androgyny scale).

The analysis has identified significant differences depending on the score obtained on the Androgyny scale ($F(1,232) = 38.561$, $p < .001$) and depending on the country of origin ($F(1,232) = 9.661$, $p = .002$). These results have an acceptable statistical strength (above .70), which indicates the fact that they did not appear accidentally.

If we analyze these results from the point of view of the proportion of the effect (partial η^2), we can notice that the Androgyny scale has a major effect on score variation on the Beck scale. According to this indicator, 14,7% of the dispersion of the variable *depression* can be attributed to the interpersonal differences at the level of androgyny. The relation between these two variables is significant and negative ($r(230) = .346$, $p < .001$).

The variation of the score on the Beck scale is also due to the nationality of the tested subjects. Thus, this independent variable explains approximately 4,2% of the variation of the variable *depression.* According to the results presented in Table 4, Greek participants have recorded an average of 2.26 (SD = 0.69) and UK participants have recorded an average of 2.43 (SD = 0.46).

In the present paper we have presented five case studies which we have discussed from the perspective of the scores in androgyny and of the way in which the information offered by these scores can be used in therapeutic interventions.

FINAL CONSIDERATIONS

The present paper subscribes to recent preoccupations regarding the role and implications of gender identity formation upon adaptation and upon pathology implicitly.

In the presentation of theoretical aspects which underlie the conducted study, we have placed focus on the theoretical perspectives that try to describe or explain the way in which gender identity is formed, the chronological markers of its development, as well as the favorizing and preventing factors. Theoretical perspectives differ depending on the relative accent placed on the psychological, biological and socio-cultural determinants, the nature of the models for gender identity transmission (identification, cognitive construction, modeling, genetic transmission, social construction etc) and the time frame from the human development spectrum to which it refers (early childhood, adulthood, entire life).

An important conclusion of these studies is the fact that masculinity, and its attributes respectively, seems to be a gender feature more valued by society than femininity. Besides, high scores in masculinity would be a good predictor of psychological health operationalized as self esteem or the absence of pathology than femininity or sexual orientation.

In this context double gender identity (both feminine and masculine) has started to gain researchers' interest as a gender identity which acquired the status of an aspiration. Although these romantic visions related to androgyny have been abandoned, the concept of androgyny has stimulated a series of studies that tried to connect it to the majority of the variables investigated by the psychological studies, from self-efficiency, self-esteem to problem solving, creativity, as well as variables of the quality of life and pathologic elements respectively.

The best known instrument for measuring androgyny is the inventory made by Bem, Bem Sex Role Inventory (BSRI). Bem has conceived this instrument in the '70s, in full ascension of the feminist movement. BSRI was conceived for the evaluation of the extent to which a person can detach from those characteristics which are considered attributes of the opposite sex. The assumption underlying this test is that people differ in what regards the degree to which they adhere to these standards (Bem, 1979). Androgynous persons who do not adhere to these standards have high scores both in masculinity and femininity, which seems to offer them an advantage over the persons with high scores only in masculinity or femininity, corresponding to the biological gender.

In the present study we proposed to investigate mainly the relation between androgyny and depression in the context of two different cultures (Greece and Great Britain). In the design of our study we have included a series of variables which we assumed might have an influence upon this relation, as we have deducted from the specialized literature analysis: the gender of the participants, their sexual orientation and age.

Referring to depression we could state that currently depression is one of the most spread scourges of our century, a clinical condition which affects millions of people annually, profoundly altering socio-familial functions of the individual. The most recent statistics of the USA appreciate that approximately 17% of the adult population in the USA (regardless of race, ethnicity, or socio-economic affiliation) experience at least one major depression episode throughout life and another percentage of 5% of the population will develop minor or medium forms of depression. Globally considered dependant on age, the maximum incidence of depression is situated somewhere between 25 and 45 years of age, equally affecting both sexes with a moderate predisposition in the favor of women (the ratio between men and women being of 2/1 or 3/1). In the light of what was presented it is necessary that we remind the most redoubtable complication of depression: suicidal risk which varies depending on two parameters: gender and age, being well-known that during puberty the male/female ratio is unitary (sometimes slightly bent in the favor of the masculine sex), the incidence of suicide sometimes marking a peak between 13-15 years old. The low rate of suicide during childhood rises with adolescence, a period imprinted with profound individual change which exposes it in a certain harsh manner to depression, then following a plateau period between 25-45 years old during which suicidal trials often have a non-fatal character, then rising with age and reaching again a high rate above the age of 65. A percentage of almost 10% of major depression starts after the age of 60. Also, approximately one third of the patients who manifested a major depression episode will have in the following five years another major depression episode, the rate of the iteration rising proportionally with the number of depression episodes.

Weighting the information presented by researchers from the field of depression, the investigation of the factors that might have a protective role in the psychic balance of a person becomes relevant, preventing development and apparition of some depressive episodes.

We will further present the most important results we obtained, the contribution that the present paper brings in the theoretical, methodological and applicative scheme, as well as further directions of interest from the point of view of continuing the investigation of the studied issue.

A first objective of our study was the investigation of the factors that contribute to the variance of the scores in *gender roles.* The hypothesis formulated for this objective are based on the results of the studies from the specialized literature which indicate a higher frequency of the assumption of a gender identity complying to the biological sex, i.e. an association of masculine gender characteristics with the masculine sex and of feminine gender characteristics with the feminine sex. A certain percentage of both sexes will assume characteristics corresponding to both gender identities, being labeled as androgynous. The results of our study confirm this association, the majority of the male participants being characterized as masculine (71%) and the majority of the female participants being characterized as feminine (67,8%). Approximately one quarter of the female and of the male participants are characterized as androgynous.

The separate analysis on the two cultures reveals the fact that the percentage of androgynous men is higher in the British sample, and on the contrary, in the Greek sample, a higher percentage of women are considered androgynous.

Concerning the second hypothesis of our study regarding the relation between androgyny and sexual orientation, the results confirm also the observations of other studies that have noticed an association tendency between homosexuality and androgyny.

Flexibility is considered of central importance for health and a well-adapted personality (Bem, 1975; Zinic, 1995). Flexibility was described as ‘the ability to adapt one’s behavior to the interpersonal solicitations within a wide range of situations” (Paulhus & Martin, 1988). Besides behavioral manifestations, it was suggested that cognitive flexibility implies the ability to “break the set”, to reclassify an object from an obvious category into one that is less obvious (Carter, 1985).

People who can build up strategies regarding alternative behavioral options on the basis of situational factors are cognitively more flexible than those who only see a correct and adequate modality of behavioral response. Cognitively flexible persons are willing to try out new ways of behaving, to confront themselves with unfamiliar situations and to adapt their behavior in order to respond to the necessities imposed by the situation (Martin & Rubin, 1995).

While gender differentiated persons are strongly motivated to maintain their consistent behavior with an internalized standard regarding gender role, androgynous persons are capable to remain sensitive to the changing constraints of the situation. Bem claimed that unlike traditional gender roles, the flexibility associated to androgyny contributes to a more integrated identity of the person.

Due to the fact that homosexuals are seen as a group that violates more frequently than heterosexuals the boundaries of gender role, it would be expected that the former ones be classified as androgynous to a greater extent (Carlston & baxter, 1984; Orlofsky & Windle, 1978 or Zoccali & co, 2008).

Concerning the third hypothesis of the present study, we did not expect major differences between the participants coming from the two different countries regarding the variance of the scores in androgyny.

Furthermore, we did not expect to record a significant difference in score variance in the Bem Inventory. This difference vanished, however, when we considered the comparative frequency of androgyny, masculinity and femininity in the two countries.

Given the fact that after the age of 25 sexual orientation is quite steady, we do not expect significant differences regarding the number of androgynous persons within the different age categories.

The results confirmed this hypothesis, the differences between androgynous, masculine and feminine persons being insignificant among the 4 age categories investigated. We recorded, however, a difference between the average of the scores in the Bem Inventory among the age categories 36-40 and 40-45 which is probably accidental.

A second objective of our study consisted of the investigation of the relation between the mentioned variables (nationality, gender, sexual orientation and androgyny) and the mood of the participants, more precisely their score in depression measured with BDI-II.

There is a series of studies which have investigated the relation between sexual orientation and well-being, adaptation to the environment and psychopathology. A part of these studies claim that homosexuals present a substantially higher risk of psychiatric disorders compared to heterosexuals.

The results of these notice a higher incidence of suicide, depression, bulimia, antisocial personality disorders and substance abuse.

For instance, Herrell et al. (1999) has conducted a study on twins who fought in Vietnam. The conclusion was that, in average, homosexuals presented a suicide risk (thoughts and actions) 5,1 times bigger that their heterosexual colleagues.

In this same sense, Fergusson et al. (1999) has conducted a longitudinal study following a big group of people from New Zealand, from birth until the age of 20. The conclusions of the study have indicated a significantly higher incidence of depression, anxiety, behavior disorders, substance abuse and suicidal thoughts in those who were active homosexuals.

The same results were also obtained by a Dutch study (Sandfort et al. 2001) indicating a high level of psychiatric problems in homosexual persons.

On the other hand, there are studies that have not found differences between homosexual and heterosexual persons regarding certain types of pathology.

For instance Gonsiorek (1982), in an analysis on the specialized literature, shows that there are no data which would indicate psychiatric differences between homosexuals and heterosexuals, or if they existed, they might be attributed to the social stigma. Similarly, Ross (1988), in a multicultural study, noticed that the majority of homosexuals were within normal psychological limits.

The conclusion of the studies of the last decade is that suicide has a much higher frequency among homosexuals that among heterosexuals. In average, suicide is approximately three times more frequent among homosexuals than among heterosexuals. However, some authors could not find signs showing that finalized attempts are more frequent (Hendin, 1995). The current data in Holland showed for the first time that, at least among homosexual men who ended a form of partnership, finalized suicide is more frequent than among heterosexual men (Mathy, Cochran, Olsen and Mays, 2009).

It was reproached to previous studies regarding suicide among homosexuals the fact that the sample of homosexuals in the study is not representative for the homosexual population; it is possible for this study to also have this problem, i.e. homosexuals who have official civil partnerships would not be representative for the homosexual segment in general.

Depression is a relatively common psychic condition, being one of the most debilitating mental illnesses, this being perhaps one of the reasons for which the interest in this disease has not lowered, but remained a constant and major preoccupation. Researchers in the

field unanimously agree that depression has a higher prevalence in women, being generally estimated a female – male ratio of 2:1.

Given the fact that the majority of the studies indicate differences in the incidence of severe depression among men and women, we appreciate that these differences will manifest in our study as well, women generally recording a higher incidence of depression than men.

Also, we assumed that there will be differences between heterosexual and homosexual persons regarding the scores in depression, in the sense that homosexuals will have higher scores than heterosexuals in this variable.

Our results have not indicated significant differences between men and women regarding BDI scores. These results seem to infirm our hypothesis. If we analyze the data from the perspective of the severity of depression, we notice that the majority of the participants in our study do not have a score in BDI-II that would indicate the presence of depression, but the majority have scores that indicate its absence or a mild depression. This thing could be investigated in another study, i.e. the extent to which, if the sample comprises participants with medium or severe depression in the same proportion with mild depressions or absence of depression, there will be differences depending on the sex and sexual orientation of the participants. In the case of this variable as well, the expected differences were not noticed, probably for the same reason mentioned above.

Erico Castro-Costa, from King's College London, Great Britain has conducted a comparative study on several countries regarding the prevalence of depression. The results of this study indicated that Greece was among the lasts on the list, next to Spain and Italy. The prevalence of depression in the general population from Greece is of approximately 10% (Moussas et al., 2008), while the studies estimate depression prevalence rates in Great Britain of approximately 12% among the general population.

In conclusion, we estimate that there will be differences between the participants in our study from the two countries, in the sense that English people will have higher scores in depression than Greeks.

There was a significant difference between Greek and English participants regarding the score on the depression scale, English people being significantly more depressive than Greeks. A series of explanations may be stipulated for this observed difference – from the ones related to culture, climate or even diet (a very recent longitudinal study published in *Archives of*

General Psychiatry on a sample of 10.094 participants showed that after 4 and a half years the participants who adopted a Mediterranean diet recorded a 30% lower risk to develop depression than the other participants. (Sanchez-Villegas, 2009)

The androgyny model proposed the fact that psychological well-being will be maximized by androgynous orientation and suggests that this orientation would "define a more human mental health standard" (Bem, 1974; Bem, 1978; Gilbert, 1981).

However, this proposed relation between androgyny and psychological well-being was questioned by the empiric discoveries which suggested that the effects of androgyny upon well-being would be due to the component *masculinity,* the influence of femininity upon psychological well-being being negligible (Antill & Cunningham, 1979; Locksley & Colten, 1979; Silvern & Ryan, 1979; Whiltley, 1983). These results have been incorporated in a model of masculinity in which the well-being of a person is seen as a function of the extent to which he/she has a masculine orientation regardless of the gender.

In order to clarify the results of the various studies dealing with the relation between gender orientation psychological well-being, Whitley (1985) has realized a meta-analysis whose general results best claim the model of masculinity, this latter having a moderate relation both with the absence of depression and a higher degree of adaptation.

Weighting these data from the literature, we consider that there will occur differences between androgynous, masculine and feminine persons regarding the score in depression. More specifically, androgynous and masculine persons will have lower scores in depression than feminine persons.

Covariance analysis has identified significant differences depending on the score obtained in the Bem Inventory ($F(1,232) = 38.561$, $p < .001$), which confirms our hypothesis. According to this indicator, 14,7% of the dispersion of the variable *depression* may be attributed to interpersonal differences at the level of androgyny.

The case studies presented in the present paper come to illustrate the way in which clients' results in androgyny may facilitate psychotherapeutic intervention and may open new interpretations, intervention directions or therapeutic objectives.

Methodological contributions of the paper

The translation and a first adaptation of the Bem Sex Role Inventory (Bem, 1974) and of BDI-II (Beck, Steer & Brown, 1996) were made on the Greek population. The analysis of the parameters referring to the internal consistency and the fidelity of the questionnaires translated by the author has proved their value and the possibility of using them in the study of gender role and depression.

Another innovative aspect of the present study in comparison with other studies on androgyny and psychopathology is the comparison of two populations belonging to different cultures.

Contributions in the field of practical applications

By the fact that it supports the theories which consider the lack of rigid identification with strict, traditional gender roles, this study supports the benefits of androgynous orientation by the fact that it allows a better adaptation to the environment and it may constitute in a protective factor for depression. Thus, it could represent the basis for the construction of some prevention / intervention programs which would focus on the development of an androgynous orientation that would allow people a greater flexibility in the adoption of several coping strategies, without the boundaries set by the prescriptions of the traditional gender roles.

Suggestions for further studies

As we have already mentioned, it is probable that the relation sexual orientation – depression would be better delineated if the sample of subjects was more balanced regarding the forms of depression. Moreover, further studies could as well investigate other variables related to mental health or pathology.