

Perception of Occupational Gender-typing: Contrasting French from Maghrebi Origin's and French from European Origin's Viewpoints

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Abstract

The differences in occupational gender-typing between French students of Maghrebi origin, French students of European origin, and French older adults of European origin were examined. The students of Maghrebi origin demonstrated a higher level of occupational gender-typing than the students of European origin or the older adults but the difference in gender-typing was not considerable and the linear association between mean ratings was impressive. In addition, the students of Maghrebi origin demonstrated an equivalent level of occupational gender-typing than the one found just ten years ago among French students of European origin. These results are consistent with previous findings showing that integrationism and individualism were the preferred acculturation orientations among persons of Maghrebi origin living in France.

Keywords: occupational gender-typing, Maghreb, acculturation, sex stereotype

1. Introduction

Perception of occupational gender-typing is an important topic because, among other things, occupational choice, occupational selection, and career promotion are heavily affected by that kind of representation (Cuddy, Fiske, & Glick, 2004; Kreimer, 2004). Shinar (1975) provided the first data regarding the perceptions by students of occupations as feminine, gender neutral, or masculine. She presented American college students with job titles and asked them to indicate the location of each of it along a 7-point gender scale. The mean rating was 3.16; it was distant from the neutral value (4) and closer to the masculine pole of the scale (1) than to the feminine pole (7). Among the jobs considered at that time as most masculine, one can, unsurprisingly, quote miner, highway maintenance worker, heavy equipment operator, U. S. supreme court justice, building contractor, construction worker, mining engineer, railroad conductor, boat captain, and auto mechanics. Among the (few) jobs considered at that time as most feminine, one can quote manicurist, registered nurse, receptionist, and private secretary. The standard deviation of the ratings was 1.36, showing considerable variation among mean ratings. The mean absolute value of the deviation from the neutral point of the response scale (4) was 1.36; that is, the mean degree to which each job title has been considered as masculine or feminine was of more than one point (46% of the half-length of the scale). Few differences, however, were found between the mean ratings of women and men.

Shinar's study was replicated in 1993 by Beggs and Doolittle (1993). The mean rating found in this second study was 3.41; that is, closer to the center of the scale, indicating that ratings were possibly less gender-typed in 1993 than in 1975. Also, the standard deviation of the ratings was lower, 1.19, and the absolute value of the deviation from the neutral point of the response scale was lower 1.15 (38% of the half-length of the scale). The conclusion of the authors was that occupational gender-typing was still present but to a lesser degree. Despite the fact that mean ratings were more gender neutral, linear correlation between both rating sets was very high: .96. It might be said that, from 1975 to 1993, gender-typing perceptions among American college students has conserved the same structure but has been neutralized.

Shinar's study was replicated by Muñoz Sastre, Fouquereau, Igier, Salvatore and Mullet (2000) on European samples composed of Spanish and French students who were interviewed in 1994-1995. Although Spanish and French mean ratings were closer to the gender neutral value than U. S. mean ratings, there was still a substantial difference (more than half a point) between the general mean rating observed in the two samples (3.45) and the

neutral value (4.0). Standard deviations seen in the European sample were lower than those already found in the American samples, and the mean absolute value of the deviations from the neutral point of the response scale was also lower: 0.92 (30% of the half-length of the scale). The authors concluded that gender-typing was not greater in Spain and France than in the U. S.

1.1 Why Studying Occupational Gender-Typing? The Example of Vocational Choice

In her circumscription and compromise theory of vocational choice, Gottfredson (1981) attributed to the gender dimension the most important role in vocational decisions. According to that theory, individuals gradually build up a space of "acceptable" occupations on the basis of four general criteria: a biologically based criterion, gender; a social criterion, status; a psychological criterion, field of interest; and a criterion which draws on the reality principle, accessibility of training and jobs.

Gender is, developmentally speaking, the first criterion taken into account. The social significance of occupational types is perceived clearly by children of age 7 to 8. Girls at this stage in development have learned to model their behavior and aspirations on those of their mother or female caregiver. Similarly, boys use their father or male caregiver as models. For this reason, the occupational space at this age can be viewed as divided into two parts. One contains jobs compatible with the gender-role criterion, and the other contains unacceptable jobs. The latter are those that girls consider to be typically masculine and boys consider to be typically feminine. Thus, at this age, the occupational space can be described as one-dimensional.

Social status (prestige) is the second criterion to be taken into account and is thought to be perceived by age 10, and field of interest is the third criterion to develop: Teenagers start to be aware of their own interests and aspirations at about age 14. As a result, by this age the zone of acceptable alternatives is already considerably reduced. It only covers those occupations that are seen as compatible with gender-role, with social-status, and with the occupational values and interests the adolescent attributes to him/herself. Finally, the accessibility criterion emerges only at a time when more or less irreversible decisions must be made. Given the structure of the labor market in a given region, or the high cost of certain occupational specialization, in the best of cases only some (not all) of the occupations that survived the three first restrictions can remain concrete possibilities. These can be the basis for career plans. In less favorable instances, none of the occupations in the zone of acceptable alternatives can be entertained. In this case the zone has to be enlarged, which is what Gottfredson calls a compromise.

The gender-role criterion, which is the first in the process of circumscription, is for this reason the most resistant to change. In addition, this criterion applies to the whole set of occupations. The social-status criterion appears to be less resistant to change. Furthermore, this criterion only applies to a reduced subset of occupations, those which are gender-compatible. Consequently, the typical pattern of compromise is that vocational interests tend to be sacrificed first, social status second, and gender-type last (Gottfredson, 1981).

Gottfredson's theory has stimulated a series of studies investigating either the circumscription component or the compromise component of her theory, or both. Taylor and Pryor (1985) showed that the influence of gender can be considerable for the first or second choice (backup choice). Hannah and Khan (1989) showed that, among Americans, the mean self-estimations in ability to learn and to succeed in a job are higher for gender-compatible occupations than for others. Henderson, Hesketh and Tuffin (1988) showed that the influence of gender appears before the age of six and lasts at least until adolescence (see also Hesketh, Elmslie, & Kaldor, 1990; Hesketh, Durand, & Pryor, 1990; Leung & Plake, 1990). Muñoz Sastre and Mullet (1992) showed that among Spanish adolescents the importance of the prestige and interest determinants varied considerably as a function of the gender of the respondent. Similar results were found by Mullet and Neto (1988) on Portuguese samples (see also Mullet, Neto, & Henry, 1992).

Glick, Wilk and Perreault (1995) assessed the factorial structure of Gottfredson's cognitive map of occupations. Twenty-five American undergraduates were presented with a reduced version of Shinar's questionnaire, and instructed to rate each occupation on several different scales derived from Gottfredson's work. Gender and prestige were the most important factors in this structure and they were unrelated. In a similar study conducted on a larger sample of 500 Spanish pupils aged 14 years, Muñoz Sastre, Mullet, and Semin (1999) presented their participants with the complete version of Shinar's questionnaire. Participants were instructed to rate each occupation on one of 10 different scales: femininity, masculinity, prestige, income, realistic, research, artistic, social, entrepreneurial, and conventional. Exploratory and confirmatory factor analyses conducted on the 129 x 10 matrix of means showed that the best solution found was a three-factor solution involving gender and social status as the main factors.

1.2 The Present Study

Despite the social importance of the topic and the ubiquity of the phenomenon that concerns young children and adolescents as well as adults, and that concerns many more domains than just vocational choice, no data base on occupational gender-typing is, to our knowledge, currently available for Maghrebi populations living in Europe. This is unfortunate since populations from Maghrebi origin tend to correspond to a non-negligible segment of the whole population in many European countries. The present study was a replication on a sample of French persons from Maghrebi origin the studies of Shinar (1975), Beggs and Doolittle (1993), and Munoz Sastre et al. (2000).

From a cultural viewpoint, French people of Maghrebi origin can be considered as more collectivists, and less individualists than French people of European origin: According to Hofstede (2001), the level of individualism (collectivism) in France is about 65 by comparison with a level of 35 in the Maghreb. Collectivistic worldviews construe the self as socially embedded, and emphasizes collective norms and relationships and collective well-being. As a result, in collectivistic cultures, occupational gender-typing may be stronger than in less collectivistic cultures because in collectivistic cultures each member of the community tends to be attributed a particular social role, and this role is strictly determined by societal characteristics, notably by age and by gender much more than by personal interests, values and capacities (Ho, 1993; Markus & Kitamaya, 1991, for a recent overview of the feminine condition in Arab countries, see Marín & Deguilhem, 2002). By contrast, individualistic worldviews construe the self as independent and self-reflective, and emphasize personal responsibility and personal well-being. As a result, in individualistic cultures, occupational gender-typing may be weaker than in other cultures because in individualistic cultures, each member of the community is expected to freely choose the role he/she wishes to play in society as a function of her interests and capacities more than as a function of societal characteristics (Hsu, 1985; Markus & Kitamaya, 1991). In particular, as illustrated by Korupp, Sanders and Ganzeboom (2002), the intergenerational transfer of the gender-typing of an occupation in individualist cultures is typically small.

As they usually live in France for many years, people of Maghrebi origin have had time to acculturate to their host country. According to Berry (1997, 2005), immigrants and their descendants may endorse different acculturation orientations as a function of their attitude towards their own culture, their attitude towards the host country's culture, and the way they construe themselves as individuals or as members of communities (Singelis, 1994).

The integrationist acculturation orientation is characterized by a positive attitude towards both cultures. Integrationists seek to maintain some aspects of their own culture while at the same time adopting some aspects of the host country's culture. In contrast, marginalization is experienced by the immigrants who adopt a negative attitude toward both cultures.

The assimilationist orientation is characterized by a positive attitude toward the host society's culture and a negative attitude towards one's own culture. Assimilationists seek to adopt all aspects of the host country's culture and relinquish as many aspects as possible of their own culture. In contrast, the separatist orientation is characterized by the reverse pattern of attitudes. Separatists seek to protect themselves, as far as possible, from the host country's culture. Finally, individualists do not construe themselves as members of communities but as valuable individuals, irrespective of their social group membership. Individualists seek to go their way in the host society because of the opportunities it can offer. They adopt or reject cultural aspects of both societies as a function of their personal assessment of the intrinsic value of these aspects.

As shown by Barrette, Bourhis, Personnaz and Personnaz (2004), a majority of French students of Maghrebi origin probably share individualist and integrationist acculturation orientations. A minority of them, however, tend to prefer a separatist orientation.

Research directly comparing women and men from Maghrebi origin's attitudes towards jobs and employment with women and men from European origin's attitudes has been scarce. Bouazzaoui and Mullet (2005) examined the relationship between anticipated life satisfaction, personal employment, and spouse employment as perceived by French people from Maghrebi origin and French people from European origin. They showed that among young women in general, the spouse's level of employment (from no job to full-time work) was the strongest determinant of anticipated well-being at 45, and that the effect of this factor was much stronger among women from Maghrebi origin than among women from European origin. Symmetrically, they showed that among young men in general, the personal level of employment was the strongest determinant of anticipated well-being, and that the effect of this factor was much stronger among men from Maghrebi origin than among men from European origin. In both samples, the women's level of employment was of secondary importance but,

nevertheless, played a more important role among women of European origin than among women of Maghrebi origin. These results were consistent with the view that French of Maghrebi origin are more collectivist (less individualist) than French of European origin. They were also consistent with the view that acculturation has largely taken place through a type of orientation that best corresponds to integration or assimilation rather than separation. The observed differences between the two groups were not huge differences. In the sample of French of Maghrebi origin, the women's level of employment had a notable effect on anticipated well-being, among male participants as well as among female participants.

No data base on the evolution of gender-typing as a function of age is currently available. This is unfortunate because stereotypes as regards occupations apparently quickly evolve. From 1975 to 1993, as shown above, the mean level of gender-typing passed from 1.36 (Shinar) to 1.15 (Beggs & Doolittle). The level of gender-typing level reported in studies published later was still lower (.92 in Muñoz Sastre et al., 2000). As a result, we decided to replicate these studies, not only on a culturally different sample, but also on a sample of older French adults from European origin.

1.3 Hypotheses

Our first series of hypotheses, based on the consideration that the participants from Maghrebi origin have been socialized in a more collectivist/less individualist culture than the participants from European origin, was that (a) the mean ratings observed among the students from Maghrebi origin should be closer to the masculine pole than the mean ratings observed among the students from European origin, and (b) the mean absolute deviation from the neutral scale value (4) should be higher among the students from Maghrebi origin than among the students from European origin.

Our second series of hypotheses, based on the consideration that the participants of Maghrebi origin had probably acculturated themselves through a process that does not relinquish the European culture (individualism or integration), was that (c) the mean ratings observed among the students of Maghrebi origin, although expected to be closer to the masculine pole than the mean ratings observed among the students of European origin, should, however, not be extremely different from these mean ratings, and (d) the mean absolute deviation from the neutral scale value (4), although expected to be higher among the students of Maghrebi origin than among the students of European origin should, however, not be extremely different from these mean ratings

Our third series hypothesis, based on the consideration that occupational gender stereotypes are seemingly shrinking over time and generations was that (e) the mean ratings observed in the present study among the older adults should be closer to the masculine pole than the mean ratings observed in this study among the students from European origin, (f) the mean absolute deviation observed in the present study among the older adults should be higher than the mean absolute deviation observed in the present study among the students from European origin, (g) the mean ratings observed in this study among the students from European origin should be farther to the masculine pole than the mean ratings observed ten years ago (1994-1995) and reported by Muñoz Sastre et al. (2000), and (h) the mean absolute deviation observed in the present study among the students from European origin should be lower than the mean absolute deviation reported by Muñoz Sastre et al. As no gender differences were found in any of the reported studies, no hypothesis was made as regards possible gender effects.

2. Method

2.1 Participants

Two hundred undergraduate French students from François-Rabelais university (Tours, France), and one hundred older French adults participated in the study. One hundred participants (50 women, and 50 men) were young adults from Maghrebi origin. Their age ranged from 18 to 36 ($M = 24.5$, $SD = 3.5$). One hundred participants (50 women, and 50 men) were young adults from European origin. Their age ranged from 18 to 39 ($M = 26.6$, $SD = 4.4$). One hundred participants (50 women, and 50 men) were older adults from European origin. Their age ranged from 40 to 75 ($M = 64.3$, $SD = 5.1$).

2.2 Material

The first 129 job titles used were identical to those in Shinar's study (see Table 1). Translation of job titles into French was done by three trained experts in vocational counseling. Job categories were then back-translated into English to check for inconsistencies. For some job titles, the best possible equivalence between the terms was in fact obtained after a whole series of translations and back-translations.

An additional set of 18 job titles was created in order to reflect the evolution in the job market since 1975. Most of these additional job titles were chosen for complementing the subset of "feminine" occupations (e.g.,

esthetician). Each job title was followed by a 7-point rating scale representing the degree to which the occupations were perceived as being masculine (1), feminine (7), or gender neutral (4).

2.3 Procedure

The study was described to participants as an investigation of the gender perception of occupations. As in Shinar (1975), students were presented with the list of occupations during regularly scheduled classes and asked to indicate whether the jobs in the questionnaire were feminine, neutral, or masculine by placing cross-marks on the scale.

The older participants were contacted in the streets of the city (Tours, France) and requested to participate. All participants were urged to base their assessments on their own judgments. The data was gathered in 2004-2005.

3. Results

The occupational ratings were analyzed for each occupation. The mean student's ratings and standard deviations are given in Table 1. No gender differences were found.

Table 1. Mean Ratings and Standard Deviations Observed Among the Students from Maghrebi Origin and the Students from European Origin. Mean Differences Between Ratings

Items	Maghrebi		European		Dif.
	M	SD	M	SD	
Geologist	2.79	1.15	3.61	0.68	-0.82**
Prison warder	2.58	1.13	3.36	0.99	-0.78**
University president	2.71	1.10	3.48	0.81	-0.77**
Watch repair work	2.64	1.14	3.36	0.77	-0.72**
Construction worker	1.30	0.61	1.96	1.08	-0.66**
Top labor official	3.31	0.95	3.97	0.72	-0.66**
Pawn broker	2.46	1.18	3.11	1.14	-0.65**
Mining engineer	2.14	0.98	2.78	0.95	-0.64**
Bell captain	2.01	1.13	2.64	1.02	-0.63**
Air traffic controller	2.72	1.09	3.34	0.86	-0.62**
Physicist	2.75	1.04	3.36	0.86	-0.61**
Sales manager	3.05	0.85	3.65	0.70	-0.60**
Aviator	2.50	1.15	3.09	0.93	-0.59**
Railroad conductor	2.54	1.10	3.13	0.98	-0.59**
Oceanographer	2.85	1.18	3.43	0.74	-0.58**
Building contractor	2.36	1.11	2.93	1.05	-0.57**
Mayor	3.15	1.04	3.71	0.61	-0.56**
Agronomist	3.00	0.96	3.55	0.83	-0.55**
CPA	3.36	0.90	3.90	0.72	-0.54**
Orchestra conductor	2.56	1.14	3.09	0.92	-0.53**
Auto mechanic	1.50	0.88	2.02	1.00	-0.52**
Race car driver	1.94	1.08	2.46	0.99	-0.52**
Radio technician	2.69	1.01	3.21	0.82	-0.52**
Federal judge	2.84	0.98	3.36	0.93	-0.52**
High government official	3.05	1.18	3.57	0.90	-0.52**
Computer programmer	2.56	0.89	3.07	0.92	-0.51**
Supreme Court justice	3.32	0.95	3.83	0.59	-0.51**

Business machine sales	2.64	1.08	3.14	0.85	-0.50**
FBI agent	3.06	1.24	3.56	0.84	-0.50**
Highway maintenance worker	1.65	0.93	2.14	1.01	-0.49**
Company president	2.86	3.09	3.35	0.94	-0.49**
Used car sales dealer	2.11	0.98	2.59	1.04	-0.48**
Astronomer	2.71	1.01	3.19	0.91	-0.48**
Boat captain	2.10	1.06	2.57	1.11	-0.47**
Architect	3.51	0.86	3.97	0.48	-0.46**
Personnel director	3.29	1.04	3.75	0.89	-0.46*
Taxidermist	2.91	1.01	3.36	1.05	-0.45**
Motel manager	2.99	1.08	3.44	0.92	-0.45**
School principal	3.46	0.96	3.89	0.68	-0.43**
Electrician	2.03	0.98	2.45	0.91	-0.42**
Magician	2.91	1.04	3.33	0.94	-0.42**
Sales president	3.02	0.88	3.43	0.71	-0.41**
Pharmaceutical sales	3.85	0.87	4.26	0.75	-0.41**
Dean	2.88	0.90	3.28	0.93	-0.40**
Politician	3.03	0.98	3.43	0.84	-0.40**
Dentist	3.15	0.89	3.55	0.74	-0.40**
Sport educator	2.98	0.96	3.37	0.96	-0.39**
Police sergeant	3.02	0.95	3.41	0.79	-0.39**
District attorney	3.07	0.99	3.46	0.81	-0.39**
Probation officer	3.54	0.90	3.93	0.61	-0.39**
Telephone sales	3.23	1.02	3.60	0.85	-0.37*
Fisher	2.15	1.10	2.52	1.10	-0.37
Banker	3.33	0.95	3.69	0.75	-0.36**
Heavy equipment operator	1.48	0.81	1.83	0.82	-0.35**
Laboratory technician	4.03	0.89	4.38	0.84	-0.35**
Television sales	2.88	0.88	3.22	0.79	-0.34**
Webmaster	2.90	0.90	3.24	0.91	-0.34*
Forestry engineer	3.29	0.92	3.63	0.80	-0.34*
Law clerk	3.81	0.99	4.15	0.98	-0.34
Radio announcer	3.20	0.94	3.53	0.77	-0.33*
Technical sales work	3.82	1.05	4.15	0.80	-0.33*
Receptionist	5.34	1.25	5.01	1.09	0.33
Park manager	3.00	1.03	3.32	0.92	-0.32
Engineer	3.08	0.96	3.40	0.89	-0.32
Physician	3.38	0.78	3.69	0.60	-0.31**
Jewelry sales	4.39	1.01	4.08	0.85	0.31
Humanities professor	3.82	0.69	4.11	0.53	-0.29**
Research scientist	3.36	0.93	3.65	0.69	-0.29*
Head librarian	4.90	1.05	4.61	0.87	0.29
Farm manager	2.16	0.99	2.44	0.96	-0.28

Real estate sales	3.71	1.07	3.99	0.81	-0.28
Dancer (prima ballet)	5.07	1.16	4.80	1.19	0.27
Groundskeeper	3.08	0.99	3.34	0.97	-0.26
Conservationist	3.40	1.01	3.66	0.67	-0.26
Summer camp facilitator	4.03	0.98	4.29	0.70	-0.26
Economic and social advisor	4.68	1.12	4.94	1.09	-0.26
Carpenter	1.86	0.97	2.11	1.06	-0.25
Insurance agent	3.23	0.87	3.48	0.66	-0.25
Private secretary	5.77	1.04	5.52	1.03	0.25
Manicurist	6.27	1.01	6.02	1.15	0.25
Mathematician	3.04	0.95	3.28	0.91	-0.24
Surgeon	3.09	0.89	3.33	0.89	-0.24
Meteorologist	3.46	0.95	3.70	0.75	-0.24
Clinical psychologist	4.16	0.85	4.39	0.84	-0.23
Hardware sales	2.77	0.83	2.98	0.91	-0.21
Professional athlete	3.61	0.79	3.82	0.56	-0.21
Psychiatrist	3.77	0.92	3.98	0.59	-0.21
Florist supply sales	5.39	0.94	5.18	1.07	0.21
Disc jockey	2.44	1.06	2.64	1.01	-0.20
Dry cleaning store owner	4.40	0.99	4.20	0.89	0.20
Driving school instructor	3.55	0.99	3.74	0.60	-0.19
X-ray technician	3.93	0.64	4.12	0.97	-0.19
Jewelry designer	4.38	1.14	4.19	0.92	0.19
Elementary school teacher	4.92	1.15	4.73	0.92	0.19
Managing editor	3.43	0.90	3.61	0.82	-0.18
History professor	3.50	0.90	3.68	0.71	-0.18
Singer	4.36	0.69	4.18	0.46	0.18
Stockbroker	3.61	0.82	3.78	0.93	-0.17
Dietitian	4.81	1.05	4.98	1.09	-0.17
Choreographer	4.40	0.92	4.23	1.06	0.17
Cashier	5.52	1.07	5.35	1.11	0.17
Public relation director	3.94	0.97	4.10	0.72	-0.16
Insurance agent	3.51	0.96	3.66	0.73	-0.15
Law professor	3.54	0.83	3.69	0.69	-0.15
Steward(ess)	4.63	1.12	4.77	1.00	-0.14
Miner	1.16	0.37	1.29	0.50	-0.13
Door to door sales	3.46	0.97	3.59	1.09	-0.13
Interior decorator	4.33	0.95	4.46	0.85	-0.13
Relaxation Therapist	4.37	1.09	4.50	0.96	-0.13
Social work	5.59	1.08	5.46	1.11	0.13
Occupational therapist	4.29	0.89	4.41	0.78	-0.12
Dental hygienist	4.95	1.10	5.07	1.08	-0.12
Physical therapist	3.93	1.11	3.81	0.84	0.12

Statistician	3.42	0.96	3.53	0.76	-0.11
Physician's assistant	4.94	1.05	4.84	0.94	0.10
Drafter	3.53	0.77	3.62	0.56	-0.09
Designer	3.74	0.99	3.83	0.85	-0.09
High school teacher	4.07	0.77	4.16	0.68	-0.09
Animal caretaker	4.16	0.68	4.24	0.84	-0.08
Assistant in scientific lab	4.45	0.91	4.53	0.73	-0.08
Reservation clerk	4.55	1.01	4.63	0.84	-0.08
Ombudsman	4.64	1.02	4.56	0.92	0.08
School psychologist	4.82	0.98	4.74	0.94	0.08
Short order cook	3.40	1.03	3.47	0.88	-0.07
Journalist	3.92	0.77	3.85	0.52	0.07
Counseling psychologist	4.59	0.93	4.52	0.81	0.07
Clothing designer	4.75	1.16	4.68	1.03	0.07
Hospital attendant	5.20	0.97	5.13	1.04	0.07
Acoustician	3.27	0.92	3.33	0.82	-0.06
Lithograph	4.06	0.87	4.12	0.70	-0.06
Bank teller	4.35	0.97	4.41	0.71	-0.06
Composer	3.42	0.75	3.47	0.80	-0.05
Theatrical director	3.66	1.05	3.71	0.71	-0.05
Veterinarian	3.75	0.85	3.80	0.74	-0.05
Esthetician	6.21	1.13	6.26	1.12	-0.05
Landscaper	3.55	1.01	3.51	0.96	0.04
Painter	3.92	0.68	3.88	0.61	0.04
Psychic	4.75	1.08	4.71	1.12	0.04
Customs inspector	2.80	1.04	2.83	0.92	-0.03
Rehabilitation counselor	3.92	0.88	3.95	0.73	-0.03
Writer	4.03	0.61	4.05	0.58	-0.02
Registered nurse	4.89	1.00	4.91	1.02	-0.02
Pediatrician	4.19	1.12	4.17	0.67	0.02
Pharmacist	4.18	1.03	4.17	0.82	0.01
Comedian	3.99	0.69	3.99	0.22	0.00
File clerk	4.36	0.92	4.36	0.95	0.00
Licensed practical nurse	5.72	1.02	5.72	0.99	0.00

* = $p < .01$, ** = $p < .001$. Job Titles are Ranked as a Function of the Absolute Size of the Difference.

3.1 Comparison of the Students from Maghrebi Origin's and Students from European Origin's Ratings

Students from Maghrebi origin's ratings ranged from 1.16 (Miner) to 6.27 (Manicurist) and the overall mean was 3.54 ($SD = 0.99$). The mean absolute value of the difference between ratings and the neutral point of the scale (4) was 0.90. Students from European origin's ratings ranged from 1.29 (Miner) to 6.26 (Esthetician) and the overall mean was 3.77 ($SD = 0.81$). The mean absolute value of the difference between ratings and the neutral point of the scale (4) was 0.66. The difference between the two mean values was significant, $F(1, 146) = 121.51$, $p < .001$ ($d = .26$). The difference between the two mean absolute deviations from the neutral point was also significant, $F(1, 146) = 137.91$, $p < .001$ ($d = .41$). The linear correlation between the two series of values was .98.

Despite this very high linear correlation, a great number of significant differences were found between the two series of ratings. When the .001 significance threshold was considered, no less than 56 job titles were judged significantly more masculine by participants from Maghrebi origin than by participants from European origin. The most striking differences were about the following ten job titles: Geologist, Prison warder, University president, Watch repair work, Construction worker, Top labor official, Pawn broker, Mining engineer, Bell captain, and Air traffic controller.

3.2 Comparison of the Older Adults' Ratings and the Students from European Origin's Ratings

Older adults from European origin's ratings ranged from 1.31 (Miner) to 6.27 (Manicurist) and the overall mean was 3.67 ($SD = 0.92$). The mean absolute value of the difference between ratings and the neutral point of the scale (4) was 0.78. The difference between the older adults' and the student from European origin's mean values was significant, $F(1, 146) = 38.08, p < .001 (d = .12)$. The difference between the two mean absolute deviations was also significant, $F(1, 146) = 72.81, p < .001 (d = .22)$. The linear correlation between the two series of values was .98.

Another comparison involving the other sample of students was also conducted. The difference between the older adults' and the student from Maghrebi origin's mean values was significant, $F(1, 146) = 59.08, p < .001 (d = .14)$. The difference between the two mean absolute deviations was also significant, $F(1, 146) = 39.34, p < .001 (d = .20)$. The linear correlation between the two series of values was .98.

3.3 Comparison of the Students from European Origin's Ratings and the Ratings Reported by Muñoz Sastre et al. (2000)

French students' ratings reported in 2000 by Muñoz Sastre et al. ranged from 1.02 (Miner) to 6.49 (Manicurist) and the overall mean computed on the 129 ratings was 3.45 ($SD = 1.02$). As stated above, the mean absolute value of the differences between mean ratings and the neutral point of the scale (4) was 0.92. The difference between the ratings reported by Muñoz Sastre et al., and the student from European origin's mean ratings (3.73 when computed on the common 129 job titles) was significant, $F(1, 128) = 75.41, p < .001 (d = .31)$. The difference between the two mean absolute deviations (.66 for European participants when computed on the common 129 job titles) was significant $F(1, 128) = 71.90, p < .001 (d = .42)$. The linear correlation between the two series of values was .95.

Two additional comparisons involving the other samples were also conducted. The difference between the ratings reported by Muñoz Sastre et al. and the student from Maghrebi origin's mean ratings (3.48 when computed on the common 129 job titles) was not significant ($d = .02$). The difference between the two mean absolute deviations (.93 for Maghrebi participants when computed on the common 129 job titles) was not significant ($d = .01$). The linear correlation between the two series of values was .96.

The difference between the ratings reported by Muñoz Sastre et al. and the older adults' ratings (3.63 when computed on the common 129 job titles) was significant $F(1, 128) = 40.38, p < .001 (d = .19)$. The difference between the two mean absolute deviations (.80 for the older participants when computed on the common 129 job titles) was significant $F(1, 128) = 18.87, p < .001 (d = .19)$. The linear correlation between the two series of values was .95.

4. Discussion

The present study examined the differences in occupational gender-typing between French students of Maghrebi origin and French students of European origin. The hypotheses were that the mean ratings observed among the students from Maghrebi origin should be closer to the masculine pole than the mean ratings observed among the students from European origin, and the mean absolute deviation from the neutral scale value should be higher among the students from Maghrebi origin than among the students from European origin. This is what was observed. The hypotheses were also that the differences between the two groups should, however, not be extreme. In fact, the students of European origin's mean absolute deviation from the neutral value was only equal to about three-fourths of the students of Maghrebi origin's absolute deviation. In addition, the linear relationship between the two series of ratings was extremely high, suggesting that the two structures were very close and just differed in their mean value and dispersion.

The present study also examined the differences in occupational gender-typing between French students of European origin and French older adults of European origin. The hypotheses were that the mean ratings observed among the older adults should be closer to the masculine pole than the mean ratings observed among the students from European origin, and the mean absolute deviation observed among the older adults should be higher than the mean absolute deviation observed among the French students from European origin. This is also what was

observed. The students from European origin's mean absolute deviation from the neutral value was equal to five-sixth of the older adults' absolute deviation. The linear relationship between the two series of ratings was very high: The two structures were, understandably, extremely close.

The present study finally examined differences in occupational gender-typing between French students of European origin interviewed in 1994-1995 (Muñoz Sastre *et al.*, 2000) and French students of European origin interviewed in 2004-2005. The hypotheses were that the mean ratings observed in the present study should be farther to the masculine pole than the mean ratings observed in 1994-1995, and the mean absolute deviation observed in the present study should be lower than the mean absolute deviation observed in 1994-1995. This is also what was observed. The mean absolute deviation from the neutral value observed in the present study was equal to seven-tenth of the mean absolute deviation observed in 1994-1995.

Overall, the French students of Maghrebi origin, irrespective of their gender, demonstrated a higher level of occupational gender-typing than the French students of European origin or the older French adults from European origin but, as stated before (a) the difference in gender-typing was not considerable (about 1.36 times higher than what was observed among the European students), and (b) the linear association between mean ratings was impressive. In other words, the students of Maghrebi origin and the students of European origin essentially share the same basic representations as regards occupational gender-typing: They only differ in terms of its intensity. In addition, the French students of Maghrebi origin demonstrated an equivalent level of occupational gender-typing than the one found just ten years ago among French students of European origin. In other words, the students of Maghrebi origin and the students of European origin not only share the same basic representations but these representations are evolving in the same way as a function of time. The only difference is in the exact timing of the evolution, which is a little bit earlier among the students from European origin than among the students of Maghrebi origin.

This set of results is completely consistent with previous findings showing that integrationism and individualism were the preferred acculturation orientations among persons of Maghrebi origin living in France (Barrette *et al.*, 2004, see also Camilleri, 1980, Sabatier & Berry, 1994). In Maghrebi communities living in Europe, the masculine and feminine roles have considerably evolved under the influence of Western European reality in which female work and female independence are increasingly valued by most people (Bouazzaoui & Mullet, 2005). It is remarkable that the present level of occupational gender-typing observed among French students of Maghrebi origin is already considerably lower than the one observed by Shinar (1975) among American samples of students more than thirty years ago.

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