



## Zero GPG – Gender equality: Innovative tool and awareness raising on GPG

**Detailed report on the sources of GPG issues with focus on its psychological aspects**



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## **Study of the GPG sources with focus on the psychological basis**

**Gabriella Antonucci**

Many studies have been devoted to analyze factors that affect gender pay equity. Since it was first studied more than 30 years ago, many gender differences were described and many socio-cultural and economical factors have been invoked to explain gender pay gap. Only in recent years there has been more attention to the aspects of personality that differentiate the behaviour of men and women towards their salary but still there are only few studies specifically devoted to the psychological aspects.

A recent survey collected data from ~1.4 million full-time employees in USA between July 2013 and July 2015. Results confirmed the well known economical and social reasons that explain the wage gap, such as job type, leadership positions, marital and family status and beliefs. Females between 55-65 show the largest disparity (18%) compared to females between the ages of 25-35 (6%). Even controlling for factors like experience, education, hours worked and location, this difference remains significant. Nevertheless, also in this large survey no attention was devoted to cognitive and psychological aspects.

Recently, there are many evidences that males and females differ in a variety of psychological dimensions (Bertrand, 2011). Despite promising evidence that psychological traits should matter for the gender wage gap, the few existing empirical investigations of this hypothesis have failed to find strong support for its relevance (Fortin, 2008; Manning, Swaffield, 2008; Mueller, Plug, 2006; Nyhus, Pons, 2011).

Cattan (2013) postulates that this kind of failure is due to the methodology used in the empirical literature that “relies on an implicit model of wage inequality, which assumes that inequality in traits only determines the wage distribution by affecting productivity directly and uniformly across sectors. By ignoring the possible effects that traits have on wages through human capital investments and the sorting of workers across sectors of the economy, this model could fail to capture the full impact of traits on the gender wage gap”.

There are multiple channels through which gender differences in traits can influence gender wage inequality. One factor is marriage and family, perceived as threats to job performance, whether or not they actually do affect productivity: even though men say they prioritize family over work more often than women, married working mothers have the highest pay gap compared to married working fathers even though they are less likely to put home obligations ahead of work ones. Data also shows a larger pay gap for women with children and a larger

number of career interruptions by women with children.

Generally, pay increases as careers progress. However it is shown that men and women are advancing in their careers at different rates, and with different levels of financial reward. Not only do men get promoted faster, but both the controlled and uncontrolled gender pay gap increase as job level increases. Another interesting fact is that women, when asking for raises, do not ask as often for more cash in hand as men but ask far more for more vacation days, better health insurance and more non-cash benefits.

One other channel through which gender differences affect gender pay gap is the unconscious bias, that is the beliefs we often don't even know we hold and of which we must become aware in order to correct subtle, discriminatory behaviour and policy. Gender roles not only define complementary responsibilities of women and men in family and in society but also specify personality characteristics that are socially expected and valued in women and men (Deaux, LaFrance, 1998; Eagly, 2000). Traditional gender roles that expect women to reduce or interrupt their career for family reasons seem to still be so powerful that – independent of women's agentic values, their high career motivation, academic performance, and medical qualifications – women physicians interrupted their careers for much longer than did their male counterparts. "Although the interpretation that the pressure of traditional gender roles urges mothers to interrupt their careers seems self-evident, our study did not explicitly assess the motives for parenthood-related career interruptions" (Evers, Sieverding, 2014).

A growing consensus has emerged around the idea that the relevant set of skills or attributes is multi-dimensional and incorporates both cognitive and non-cognitive traits. As comprehensively reviewed (Almlund *et al.*, 2011), these dimensions of personality have been found to affect a wide array of outcomes. Cattan (2013) models a multi-sector economy in which psychological traits shape the wage distribution not only through their occupation-specific effects on productivity, but also through their effect on occupational choice, educational attainment, experience, and fertility. The estimates obtained by the model indicate that workers sort into occupational categories according to their comparative advantage in cognition and self-confidence. The effects of these variables are not homogeneous on wages across occupations and they have a significant effect on occupational decisions.

Researchers have also been able to identify psychological dimensions along which males and females tend to systematically differ. The popular Big Five typology has often been used to classify personality traits such as openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism. As suggested in Bouchard and Loehlin (2001), women are consistently found to be both more agreeable and neurotic than men.

Self-esteem and locus of control are two other traits along which males and females have been found to differ. These traits deserve particular attention, since they are more often measured than the Big Five traits in longitudinal surveys used by economists.

As Cattan (2013) has very well underlined, these findings suggest that gender differences in psychological traits could be a possible explanation for gender differences in labour market outcomes. A few recent papers have started exploring this hypothesis, but so far the research has been quite limited in its ability to establish the importance of these factors in explaining gender wage inequality. Despite finding that females have lower self-esteem and a more external locus of control than males, Manning and Swaffield (2008) show that these measures explain little more than 2% of the gap in the British Cohort Survey. Other surveys report similar results supporting the idea that the existing evidence has been relatively unsupportive of the importance of psychological factors in explaining male-female differences in wages.

Despite the absence of reliable data in this topic, and because gender pay gap is attracting attention from policy-makers, it is important to use models that consider the relevance of multiple psychological and cognitive differences between males and females. Future research should be encouraged to include other dimensions such as attitudes towards risk and competition, along which males and females have been shown to systematically differ.

# **Gender differences in a business social networking platform: a case study**

**Francesco Di Nocera**

## **Introduction**

The expression “self-promotion” is often used as a derogatory term indicating an annoying attitude. However, self-promotion (in some settings “personal branding” is used instead) is also considered a critical component for professional success, because it predicts how candidates skills are perceived by others (Jones and Pittman. 1982) and contributes to decisions on appointments and promotions (Janoff-Bulman and Wade, 1996; Kačmár, Delery, Ferris, 1992; Rudman and Glick, 2001). In a working environment self-promoter may represent a threat for those who don't have such skill (Janoff-Bulman and Wade, 1996; Kacmar, Delery, Ferris, 1992; Stevens and Kristof, 1995; Wade, 2001; Wiley, Eskilson, 1985). However, self-promotion is often considered as more acceptable in men rather than women (Rudman, 1998; Rudman and Glick, 1999, 2001), because it matches the male stereotype (Rudman, Phelan, Moss-Racusin, Nauts, 2010). Indeed, several studies have shown that women who self-promote violate gender-related expectations such as being humble, helpful, supportive and oriented to others (Moss-Racusin and Rudman, 2010; Rudman, 1998; Williams et al., 2012) and that implies that women reject such behavior (Scharff, 2015). Conditioned by these external pressures, women would be more likely to represent themselves as more humble in public settings rather than in their private life (Daubman, Heatherington, Ann, 1992; Gould, Slone, 1982; Healtherington *et al.*, 1993). This effect has been called “feminine modesty effect”. Self-promotion skills are thus required for women in order to face the negative stereotype that they would be less competent and capable of men. Bowles and collaborators (2007) found that male managers are more prone at working with “gentle” women who accept the initial compensation offer rather than working with women who attempt a negotiation for a higher pay. This effect is limited to women candidates and does not apply to men.

## **Self-promotion through the Internet**

A particular case of self-promotion is that performed on the Internet by creating a digital identity using platforms for communication and social networking. Using those channels is becoming a must, but people rarely understand the implications of their on-line communication. On-line identity is increasingly used for creating a positive presentation of oneself (Rosenberg, Egbert, 2011), but in the process of build such a digital identity there are many pitfalls and traps to watch. Indeed, employers are increasingly using search engines

and social networks for obtaining additional information on candidates such as political and sexual orientation or religious belief that are not included in their resumes (Brandenburg, 2008; Jones, 2006). Roulin (2014) reported that people who care less about their privacy and are aimed at creating a good impression in their peers, are often naive and may broadcast sensitive information that could be used against them when it reaches unexpected targets like potential employers.

Karl and colleagues (Karl *et al.*, 2010; Karl, Peluchette, 2008) have described many risky information that could affect the potential of a candidate for obtaining a job. Indeed, 77% of recruiters declared of using search engines during the selection process thus eliminating about a third of applications because of the information on candidates obtained from the Internet (Jones, 2006). According to a CareerBuilder.com survey, candidates are excluded mainly for three types of information posted: offense to a previous employer, information that may suggest use of drugs or alcohol, and improper photos (Dipboye, Macan, Shahani-Denning, 2012). As for the scope of the present research, it is worth noting that women are usually judged in a more severe way respect to men, particularly for cursing and for declaring sexual-related information (Karl & Peluchette, 2007).

### **Case study**

The general idea behind this study is that part of the Gender Pay Gap (GPG) phenomenon may be related to gender differences in self-promotion. Differences in the way men and women would promote themselves may indeed reflect differences in employee and employer expectations (however, differences in the perception of self-promotion strategies by recruiters won't be addressed here). The investigation was run using spontaneous information provided on LinkedIn: a business-oriented social networking service mainly used for professional networking. Most of this site's revenue comes from selling access to information about its users to recruiters, thus making the information available very appealing for the scope of the present research activity. As of October 2015, LinkedIn reports more than 400 million acquired users in more than 200 countries and territories.

As for the purpose of this study we limited the analysis to one specific job position (i.e. Sales Manager) in the five Countries involved in this research project, but the same rationale can be applied to any other job positions and to other Countries.

*Sample.* LinkedIn profiles of individuals from Austria, Bulgaria, Greece, Italy and Czech Republic, whose current professional description met that of "sales manager" and who provided their profile in English language, were randomly extracted and examined. Ninety profiles (45 women and 45 men) were randomly selected for each Country, providing us with a total sample of 450 profiles. Eleven profiles were excluded from the analysis because they

did not provide any visible information (due to privacy restrictions). The final sample included 439 profiles (219 women and 220 men).

*Data collection.* Each profile was examined and a dataset including the following information was created:

- Nationality
- Gender
- Profile Photo (Formal vs. Informal photo)
- Network (n° of connections)
- Contact information (email, twitter, url)
- Profile summary
- Total work experience (n° of jobs and duration)
- Current work duration
- Projects
- Courses
- Languages
- Additional information (e.g. hobbies)
- Education (years and degrees)
- Volunteering activity
- Certifications
- Honours and Awards
- Organizations
- Groups
- LinkedIn channels followed
- Recommendations (received and provided)
- Skills (reported by the individual and confirmed by others)

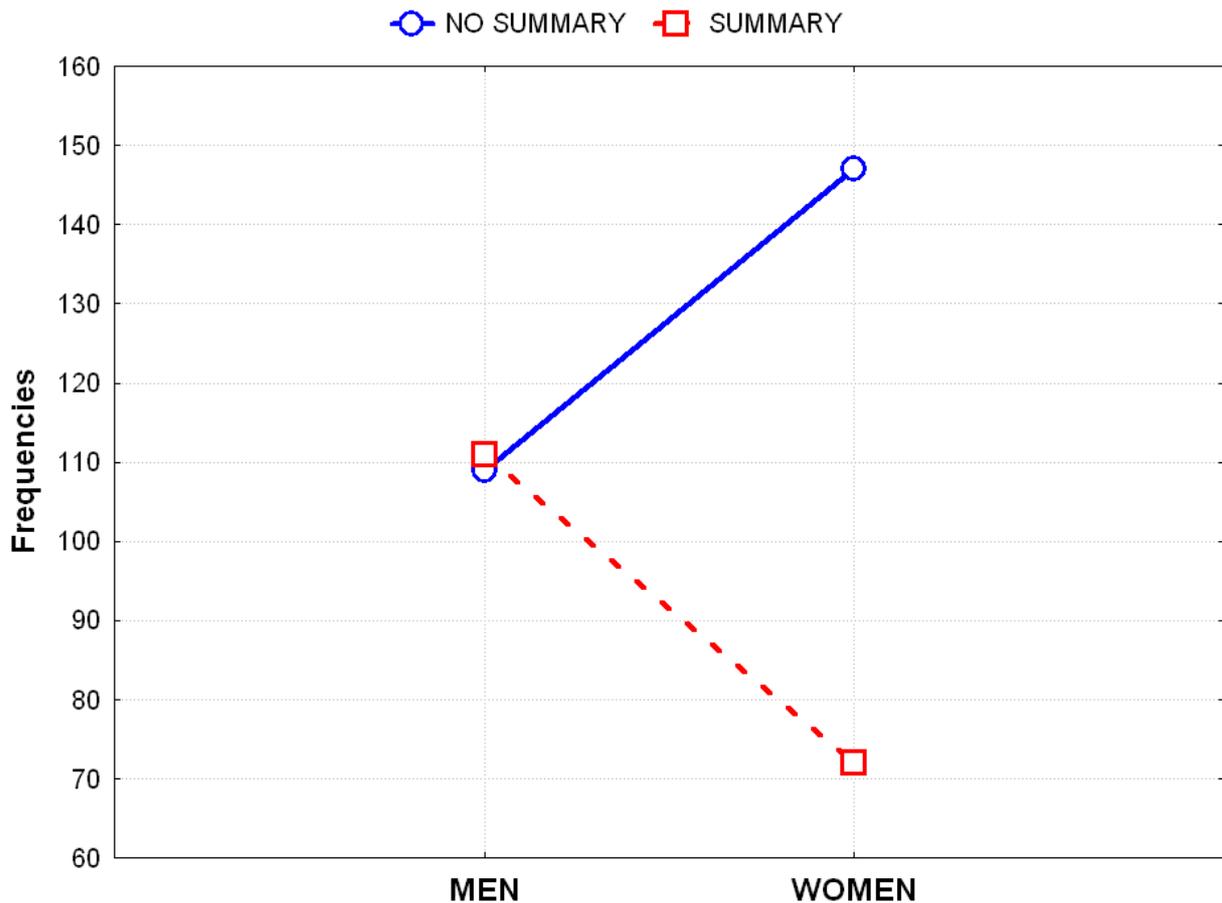
Many of these variables showed small or no variability and were not suitable for analysis (e.g. few people reported awards and honours).

*Data analysis and results (commented).* Undoubtedly, the profile picture on professional networks as LinkedIn should be professional-looking. On-line identity can be seriously damaged by pictorial information that send the wrong message. Nevertheless, many users don't understand the implications of this simple hack and use informal photos taken on vacation or depicting them together with their spouse, children, pets (or worse, pictures taken in bars or posing as for a dating site profile). Sometimes this may reflect a basic misunderstanding about the specific type of network they are subscribing to, using the

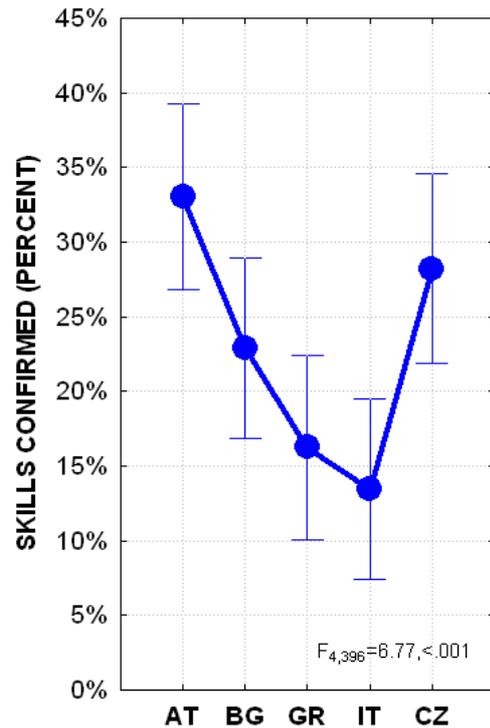
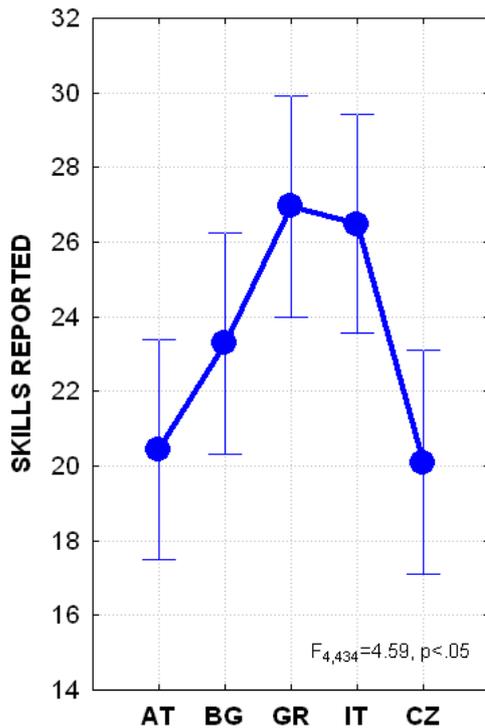
business network as they use other “leisure” social networks as Facebook. For this reason, a comparison of profiles endorsing formal vs. informal profile pictures was carried out. An ANOVA design Profile Picture (Formal vs. Informal) by Gender (Males vs. Females) was carried out using Network Size (# of connections) as dependent variable. Neither a main effect nor an interaction with gender were found. Results showed instead a significant difference ( $F_{1,435}=5.89$ ,  $p<.05$ ) for the type of profile picture: individuals with informal photos tend to have larger networks. This may suggest a lousy use of the network. Indeed, LinkedIn policy for connecting profiles is that connections should not be made until after an actual relationship has been established (i.e. add only people you really know), and having large networks is not regarded as a good self-promotion strategy. It is also true that different people will have different goals in using LinkedIn. The profiles examined here belong to the job category “sales manager”, so it is somewhat reasonable that having a large network could be seen as a strategy to support sales. However, the fact that type of picture is related to network size remains given the same job position.

Another variable that was considered useful to analyze was contact information. Visibility of the email address in the profiles is discouraged by LinkedIn policy, which favors direct connections through the platform instead. Other contact informations available are Twitter accounts (present in only 50 profiles) and a website URL (included in 32,57% of the profiles examined here). A  $\chi^2$  test was run using the availability of an URL and gender. Results showed no differences between women and men.

As the top three results from a Google search get nearly two-thirds of all the clicks (see Chitika, 2013), the profile summary is the most important part of a LinkedIn profile because it receives the most prominent position on the screen. However, many users leave it blank and only list their experience. The presence of a profile summary is therefore a crucial aspect of the self-promotion strategy. A  $\chi^2$  test showed a significant gender difference in including a profile summary due to women more often leaving it blank ( $X^2=13.95$ ,  $p<.001$ ).



Skill endorsements are the most “social” aspect of the LinkedIn platform, as they represent a way to recognize connections' abilities: a simple (one click) and effective way of building the personal brand. Two Gender (Males vs. Females) by Nation (AT vs. BG vs. GR vs. IT vs. CZ) ANOVA designs were carried out using Reported Skills and Confirmed Skills as dependent variables, respectively. Results showed that men receive more endorsements rather than women ( $F_{1,391}=9.57, p<.05$ ) and that there are differences between Countries. No significant interactions were found. Interestingly, profiles extracted from those Countries in which the ratio of confirmed skills (endorsements / skills ratio) is low, are those who also report the higher number of skills. Clearly, the difference found between Countries in terms of confirmed skills is biased and may as well be interpreted as an indication of how the best strategy for self-promotion is to limit the number of abilities reported.



## Conclusions

The rationale used in this study allowed the examination of real profiles of real people who wanted to self-promote in a business social network. The availability of a large number of profiles and the richness of the information provided by the individuals on this network is a goldmine for data mining.

Results of this study showed no crucial gender differences in on-line self-promotion, except for few aspects that could nevertheless have effect on the recruiters. One of the most important shortcomings of the available dataset is that two important information are missing: age of the individuals and date of subscription to the network. The absence of these information does not allow to interpret some results. For example, differences in working experience, job duration and education are of course related to age, and the type and amount of information provided over this network (including the number of connections) may clearly depend also on the number of years individuals have actively used the social networking platform. Nevertheless, the information obtained through this study is relevant for understanding how people self-promote and how differently women and men represent themselves, given the same job profile.

## References

- Almlund, M., A. Duckworth, J. Heckman, T. Kautz (2011). Personality psychology and economics. In E. Hanushek, S. Machin, and L. Woessmann (Eds.), *Handbook of the Economics of Education*. Elsevier Science.
- Bertrand, M. (2011). New perspectives on gender. In O. Ashenfelter and D. Card (Eds.), *Handbook of Labor Economics*, Volume 4, Part B. Elsevier Science.
- Betsch, C. (2004). Praferenz fuer intuition und deliberation. Inventar zur erfassung von affekt- und kognitionsbasiertem entscheiden [Preference for intuition and deliberation (PID): An inventory for assessing affect- and cognition-based decision-making]. *Zeitschrift fuer Differentielle und Diagnostische Psychologie*, 25, 179–197.
- Bouchard, T., Loehlin J. (2001). Genes, evolution, and personality. *Behavioral Genetics*, 3, 243 – 273.
- Bowles, H.R., Babcock, L., Lai, L. (2007). Social incentives for gender differences in the propensity to initiate negotiations: Sometimes it does hurt to ask. *Organizational Behavior and Human Decision Processes*, 103, 84–103.
- Brandenburg, C. (2008). The newest way to screen job applicants: A social networker's nightmare. *Federal Communication Law Journal*, 60, 597–626.
- Cattan S. (2013). Psychological traits and the gender wage gap. Working Paper, Institute for Fiscal Studies.
- Chitika (2013, June 7). The Value of Google Result Positioning. Retrieved from <https://chitika.com/google-positioning-value>.
- Cohen, A., Kirchmeyer, C. (1995). A multidimensional approach to the relation between organizational commitment and non-work participation, *Journal of Vocational Behavior*, 46, 189-202.
- Daubman, K.A., Heatherington, L., Ann, A. (1992). Gender and the self-presentation of academic achievement. *Sex Roles*, 27, 187-204.
- Deaux, K., LaFrance, M. (1998). Gender. In D. T. Gilbert, S. T. Fiske & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., pp. 788–827). New York, NY: McGraw-Hill.
- Dipboye, R.L., Macan, T., Shahani-Denning, C. (2012). The Selection Interview from the Interviewer and Applicant Perspectives: Can't Have One without the Other. In: N. Schmitt (Ed.), *The Oxford Handbook of Personnel Assessment and Selection* (pp. 323-352). New York: Oxford University Press.
- Duehr, E. and Bono, J. (2006). Men, women, and managers: are stereotypes finally changing? *Personnel Psychology*, 59 (4), 815-846.
- Eagly, A. H. (2000). Gender roles. In A. E. Kazdin (Ed.), *Encyclopedia of psychology* (Vol. 3, pp. 448–453). Washington, DC: American Psychological Association.
- Evers, A., Sieverding, M. (2014) Why do highly qualified women (still) earn less? Gender differences in long-term predictors of career success. *Psychology of Women Quarterly*, 38, 93-106
- Fortin, N. (2008). The gender wage gap among young adults in the United States: The importance of money versus people. *Journal of Human Resources*, 43(4), 884–918
- Gould, R.J., Slone, C.G. (1982). The "feminine modesty" effect: A self-presentational interpretation of sex differences in causal attribution. *Personality and Social Psychology Bulletin*, 8, 477-485.

- Heatherington, L., Daubman, K.A., Bates, C., Ahn, A., Brown, H., Preston, C. (1993). Two investigations of "female modesty" in achievement situations. *Sex Roles*, 29, 739-754.
- Jamali, D., Sidani, Y., Kobeissi, A. (2008). The gender gap revisited: insights from a developing country context, *Gender in Management: An International Journal*, 23 (4), 230-46.
- Janoff-Bulman, R., Wade, M.B. (1996). The dilemma of self-advocacy for women: Another case of blaming the victim? *Journal of Social & Clinical Psychology*, 15, 445-446.
- Jones, E.E., Pittman, T.S. (1982). Toward a general theory of strategic self presentation". In: J. Suls (Ed.), *Psychological perspective on the self, Volume 1* (pp. 231-262). London: Lawrence Erlbaum Associates.
- Jones, K.C. (2006, July 11). 'Digital Dirt' Derailing Job Seekers. Retrieved from <http://www.informationweek.com/story/showArticle.jhtml?articleID=190302836>.
- Journal*, 118, 987 – 1024
- Judge, T., Livingston, B. (2008). Is the gap more than gender? A longitudinal analysis of gender, gender role orientation and earnings, *Journal of Applied Psychology*, 93 (5), 994-1012.
- Kacmar, K.M., Delery, J.E. Ferris, G.R. (1992). Differential effectiveness of applicant impression management tactics on employment interview decisions. *Journal of Applied Social Psychology*, 22, 1250-1272.
- Karl, K., Peluchette, J., Schlaegel, C. (2010). Who's posting Facebook faux pas? A cross-cultural examination of personality differences. *International Journal of Selection and Assessment*, 18, 174-186.
- Lange, T. (2008). Communist legacies, gender and the impact on job satisfaction in Central and Eastern Europe, *European Journal of Industrial Relations*, 14 (3), 327-346.
- Lips, H.M. (2013). The Gender Pay Gap: Challenging the Rationalizations. Perceived Equity, Discrimination, and the Limits of Human Capital Models. *Sex Roles*, 68, 169-185.
- Manning, A., Swaffield J. (2008). The gender gap in early-career wage growth. *Economic*
- Moss-Racusin, C.A., Rudman, L.A. (2010). Disruptions in women's self-promotion: the backlash avoidance model. *Psychology of women quarterly*, 34(2), 186-202.
- Mueller, G., Plug, E. (2006). Estimating the effect of personality on male and female learnings. *Industrial and Labor relations review*, 60 (1), 3-21
- Nyhus, E., E. Pons (2011). Personality and the gender wage gap. *Applied Economics*, 43, 1 – 14.
- Paul, M. (2006). A cross-section analysis of the fairness-of-pay perception of UK employees, *The Journal of Socio-Economics*, 35 (2), 243-267.
- PayScale Survey An Analysis of Reasons for the Disparity in Wages Between Men and Women - A Report by CONSAD Research Corp - Pittsburgh, PA, 2009
- Peluchette J.V., Karl K.A. (2008). Social networking profiles: An examination of student attitudes regarding use and appropriateness of content. *Cyberpsychology and Behavior*, 11, 95-97.
- Peluchette, J.V. & Karl, K.A. (2007). The prevalence of Facebook faux pas and students' "devil may care" attitudes. *Paper presented at the Midwest Academy of Management Meeting*. Kansas City, MO, October 4-6, 2007.
- Rosenberg, J., Egbert, N. (2011). Online impression management: Personality traits and concerns for secondary goals as predictors of self-presentation tactics on Facebook. *Journal of Computer-Mediated Communication*, 17, 1-18.

- Roulin, N. (2014). The Influence of Employers' Use of Social Networking Websites in Selection, Online Self-promotion, and Personality on the Likelihood of Faux Pas Postings. *International Journal of Selection and Assessment*, 22(1), 80-87.
- Rubery, J., Grimshaw, D. Figueiredo, H. (2005). How to close the gender pay gap in Europe: towards the gender mainstreaming of pay policy. *Industrial Relations Journal*, 36 (3), 184-213.
- Rudman, L.A. (1998). Self-Promotion as a Risk Factor for Women: The Costs and Benefits of Counter Stereotypical Impression Management. *Journal of Personality and Social Psychology*, 74(3), 629-645.
- Rudman, L.A., Glick, P. (1999). Feminized management and backlash toward agentic women: The hidden costs to women of a kinder, gentler image of middle managers. *Journal of Personality and Social Psychology*, 77, 1004–1010.
- Rudman, L.A., Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues*, 57, 732–762.
- Rudman, L.A., Phelan, J.E., Moss-Racusin, C.A., Nauts, S. (2010). Status incongruity and backlash effects: Defending the gender hierarchy motivates prejudice toward female leaders. *Journal of Experimental Social Psychology*, 48(1), 165–179.
- Scharff, C. (2015). Blowing your own trumpet: exploring the gendered dynamics of self-promotion in the classical music profession. *The Sociological Review*, 63 (1), 97-112.
- Stevens, C.K., Kristof, A.L. (1995). Making the right impression: A field study of applicant impression management during job interviews. *Journal of Applied Psychology*, 80, 587–606.
- Wade, M. (2001). Women and salary negotiation: The costs of self-advocacy. *Psychology of Women Quarterly*, 25, 65–76.
- Wiley, M.G., Eskilson, A. (1985). Speech style, gender stereotypes, and corporate success: What if women talk more like men?. *Sex Roles*, 27, 993–1007.
- Williams, C.L., Muller, C., Kilanski, C., (2012). Gendered organizations in the new economy. *Gender & Society*, 26 (4), 549–573.