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## LESSONS FOR DESIGN EDUCATION AND PRACTICE IN A GENDER SENSITIVE SOCIETY

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### **ABSTRACT**

Research work and study materials on or about women in architecture are few and far between; there are also commitments to a particular gender that may place undue effect on the way individuals effectively participate in the world of design. Architects are not typically judged by their gender but by their works. The study focuses on real and perceived limitations caused by gender as it affects architects and highlights existing and proposed legislation and commitments aimed at leveling out the playing field for all contributors to the world of architectural design. Most developed nations have ratified international laws that advocate protection and participation of women in professional practice and adopted them for local implementation: gender reform to professionalism has encouraged and advanced the integration of family oriented women. However, many developing nations are yet to feel the positive effects of reviewed maternal protection laws and are still unable to find localized solutions to the dearth of women in professional practice in fields such as architecture. This study seeks to examine the relationship between gender and architectural education training and practice based on literary (secondary) sources of data as a theoretical overview . The paper highlights four key areas in which on-going gender policies impact the development of women in professional fields and proposes three reforms that would enhance the gender agenda of women in architectural practice.

**Key words:** *architecture, creativity, development, gender, intelligence*

### **INTRODUCTION**

#### **BACKGROUND TO THE STUDY**

*"In the special areas of science and engineering, there are issues of intrinsic aptitude [between the sexes]"*.

With these words in January 2005, Harvard University President Lawrence Summers lent new fuel to the contentious debate over whether gender predicts differing aptitude or intelligence in specific areas. Similarly, in a 2010 article in "Time"<sup>®</sup> magazine, Laura Fitzpatrick described the grim, present-day, reality in the persistent "discrimination" in the average pay earned by females as against their male counterparts in selected fields. The article revealed that women receive 77% of the wages paid to their male colleagues in developed economics, such as that of the United States or Great Britain (68% for African-American Women and 58% for Latinas): thereby sparking the question that inspired the said article: why has it taken so long to consider constitutional bills that address the discrimination that causes the pay gap between men and women? "Nearly half a century after it became illegal (in the US) to pay women less on the basis of their sex, why do...women still earn less than men" (Fitzpatrick, 2010) Perhaps the most compelling - and potentially damning - data of all to suggest that

gender has an influence comes from a 2008 study in which sociologist Kirsten Schist of the University of Chicago and economist Matthew Wiswall of New York University examined the wage trajectories of people who underwent a sex-change. Their results: even when controlling factors like education arise, men who transitioned to women earned, on average, 32% less after the surgery. Women who became men, on the other hand, earned 1.5% more (Fitzpatrick 2010).

In 2004 Zaha Hadid became only the first woman ever to receive the Pritzker Award, the most prestigious award for architectural merit, almost 30 years after the inception of the award. That achievement earned her the ranking of 69<sup>th</sup> on "Forbes List of 100 Most Powerful Women" in 2008. In 2010, Kazuyo Sejima (along with her male business partner Ryue Nishizawa of SANAA Studios in Japan) became only the second woman in the history of the awards to claim the top honor. This represents the harsh reality that currently, only about 12% of the potential workforce in architecture and allied construction industries, upon qualification, are female. Less than half that number, however, actually goes on to pursue an active career in design practice and education.

### **PROBLEM DEFINITION: AIM AND OBJECTIVES OF THE STUDY**

Books and articles on or about women and minority architects are few and far between. Requests by international professional bodies suggest that architects should not be judged by their gender, but by their works. Conversely, this standpoint appears to belittle the dearth of females in the architectural profession rather than create the intended "blind" critique of works of architects in assessment. This study examines the relationship between gender and architecture, specifically as it relates such as architectural design. In order to address these issues the following questions will be considered.

1. Male vs Female intelligence and creativity: is gender an issue?
2. What are the factors, real or perceived, that militate against women in fields of creative endeavors such as design?
3. Are legislation and intervention likely to compliment or complicate issues of gender in professionalism?

### **METHODOLOGY**

The study was undertaken and presented as an objective assessment of related work that has been done on the topic of women in architecture and seeks to propose some reforms that would enable local ratification of international policies. The method adopted involves the review and application of secondary sources of information interpreted after a careful observation of the indigenous conditions existing among professional women in Nigeria.

### **THEORETICAL FRAMEWORK**

#### **MALE VS FEMALE INTELLIGENCE: DOES GENDER MATTER?**

While few people seriously argue that one sex is more intelligent, researchers have found that the brains of men and women do differ physically (McCarthy, 2008).

- Brain size: men have larger brains than women by about 8-10%.

- Corpus Callosum size: many researchers believe that a woman's brain has a larger corpus callosum which is the pathway connecting the right and left cerebral hemispheres. Some researchers claim this larger size enables women to process information more quickly than men between the two sides of the brain.
- Cortical thickness and density: women's brains possess more folding. Some researchers speculate this is why women's brains are smaller overall.

A study involving 48 men and women of comparable intelligence (as measured by intelligence testing) found that women had nine times more white matter in areas of the brain associated with intelligence than men did, while men had six times more gray matter in these areas. Gray matter is involved in the brain's information-processing centres, while white matter is in the business of transferring information between parts of the brain (McCarthy, 2008).

Not only does the type of brain tissue differ between the sexes but its location differs as well. The same study found that women had about 85% of their IQ-related brain matter – both white and gray – located in the brain's frontal lobes. Comparatively, nearly all of the IQ-related gray matter in men is found equally between the frontal lobes and the parietal lobes (located behind the frontal lobes). But since the men and women surveyed achieved similar IQ test results, researchers concluded that the different types of brain architecture lead to comparable intellectual performance. In short: men and women take different paths to reach the same intellectual threshold.

Although researchers also point out that there is some evidence that the volume of the brain's gray matter can increase with learning, so also intelligence may be influenced by factors aside from biology. Sex hormones, such as testosterone and estrogen appear to have a role in brain development and function. For example, increased testosterone seems to favour the development of the right hemisphere even in fetuses. Also fluctuations of hormones such as during a woman's menstrual cycle and daily or seasonal testosterone levels in men also change cognitive abilities (McCarthy, 2008).

### **IQ and other Aptitude Scores**

Many studies consistently show that the average IQ scores of men and women are equivalent. Although most of the common tests such as the Wechsler Adult Intelligence Scale (WAIS) are intentionally designed to weed out a sex bias, some gender specific findings persist:

- Men tend to perform better on spatial questions
- Women outpace men on reading and other verbal skills.

Men score more at the extremes of the IQ scoring - both high and low. More men than women test at the lower end of the IQ scale and also at the very top. This is consistent with the membership of American Mensa, a group whose members test in the top 2% of the population on a standard IQ test. The group reports that 65% of its general membership is male and 35% is female. Yet the Association for Women in Mathematics (AWN) claims that women earn half of all undergraduate mathematics degrees and one-third of all PhD degrees

in mathematics (McCarthy, 2008) On college aptitude tests, men consistently outscore women by an average of 35 points on the math portion. Interestingly some studies show that boys and girls test about the same in mathematics in elementary schools. The girls fall behind only later in life so that by the time of senior year in secondary school, the boys test higher in college aptitude tests. Researchers continue to study whether these findings - and those like it - are the result of gender differences, environmental influences, social pressures, personal values or beliefs, or a combination of all the above. Personal skills like self-awareness and empathy influence also play a part, as women tend to be more empathetic while men seem to manage their moods better.

### **THE GENDER ISSUE: IS CREATIVITY REALLY AFFECTED?**

*"Women don't become executive creative directors because they take time off to have babies"*, according to research by University of South Carolina academic, Karen Mallia in 2009. This research seems to bear out - superficially at least - the controversial comments made by former WPP creative consultant Neil French in 2005. French was forced to resign after he said;

*"The answer is that they (women) don't work hard enough. It's not a joke job. The future of the entire agency is in your hands as a creative director. You can't be a great creative director and have a baby and keep spending time off every time your kids are ill...Everyone who doesn't commit themselves fully to their job is crap at it"*

The analysis by Mallia (2009) was more astute when she summarized her interviews with "dozens" of female directors in an article for the advertising magazine, "**Adage**", thus:

*"Research didn't reveal a single major-league executive creative director who has both children and a husband with an equally demanding job"*

There you have it: gender isn't necessarily the issue; motherhood is. No matter what your sex is, a creative job is highly competitive; an unrelenting mind game that knows no timetable (Mallia, 2009). Architecture, the most centrally placed in the field of design, is by all rights, an extremely creative profession, for which time needed for successful output, is an essential factor. It is challenging to find time to do it all therefore sacrifices are made. For some that's a career, for others it's the commitments of motherhood. It boils down to this: If you accept that to succeed in an architectural career you have to work long hours, uninterrupted, for years (first for training, then in practice) the women will winnow themselves out of contention by becoming mothers. (Mallia, 2009). On the other hand, if the one thing it takes to get to the top - lots of time and no family - is the one thing that militates against women succeeding in architectural careers, then that may be the "*prima facie*" evidence that architecture is a sexist profession.

### **Maternal Legislation and Protection**

In 2000, the International Labour Conference, a deliberative body of the International Labour Organization (ILO) adopted the re-used Maternity Protection Convention 183. Governments across the globe were encouraged to consider ratification of this important international law.

Education International and a few other affiliated international trade unions identified key rights that were necessary to be included in the new convention. (This is because teachers make up the largest number of unionized women in the world and were anxious to transfer the international law to benefit education employees). Nine key points of the maternity protection convention are.

1. Includes all women, including those employed in the informal sector.
2. Provides for the protection of the health of mother and child.
3. Ensures that pregnant and breast-feeding women are not required to perform work which risks their health.
4. Extends maternity leave to 14 weeks with compulsory leave of 6 weeks.
5. Additional leave shall be provided, as necessary, to maternal health prior and/or after birth.
6. Cash benefits to new mothers shall be paid at a level which ensures that the woman can maintain herself and her child in proper condition of health and with a suitable standard of living.
7. Maternity leave shall be paid by a government fund unless employers agree that they shall pay for the leave.
8. It is unlawful to terminate employment due to pregnancy, child birth or breastfeeding.
9. Breast feeding breaks for working women which shall be provided for the employer and shall be counted and remunerated as working time.

Table 1 shows the ratification and implementation of Maternity Protection Convention 183 by some countries around the world:

**Table I: Ratification of Maternity Convention 183 by Countries Around the World.**

Country	Birth Rate (per 1000)	TFR**		Ranking	Maternity leave granted*	Percentages of wages paid in covered period*
		00-05	05-10			
<u>Industrialized Nations</u>						
Denmark	10.54	1.76	1.80	150 <sup>th</sup>	18 weeks	100
Hungary	9.51	1.30	1.28	182 <sup>nd</sup>	24 weeks	100
Spain	9.72	1.29	1.41	169 <sup>th</sup>	16 weeks	100
United Kingdom	10.65	1.70	1.82	148 <sup>th</sup>	14-18 weeks	90 for 6 weeks, flat rate thereafter.
U.S.A	13.82	2.04	2.03	126 <sup>th</sup>	12 weeks	0
<u>Africa</u>						
Angola	43.69	6.75	6.43	11 <sup>th</sup>	90 days	100
Cote D' Ivoire	32.11	5.06	4.46	35 <sup>th</sup>	14 weeks	100
Kenya	36.64	5.00	4.96	28 <sup>th</sup>	2 moths	100
South Africa	19.93	2.80	2.64	85 <sup>th</sup>	12 weeks	45
Nigeria	36.65	5.85	5.32	21 <sup>st</sup>	90 days	100
<u>Latin America/Caribbean</u>						
Argentina	17.94	2.35	2.25	108 <sup>th</sup>	90 days	100
Brazil	18.43	2.25	1.90	136 <sup>th</sup>	120 days	100
Cuba	11.13	1.63	1.49	162 <sup>nd</sup>	18 weeks	100
<u>Asia</u>						
Israel	19.77	2.91	2.75	80 <sup>th</sup>	12 weeks	75
Philippines	26.01	3.54	3.23	62 <sup>nd</sup>	60 days	100
Vietnam	16.31	2.32	2.14	119 <sup>th</sup>	4.6 months	100
India	21.76	3.11	2.81	77	-	-

**Source:** U.S Census Bureau, International Data Base (<http://www.infoplease.com/ipa/A0004395.html>), 2007

\*Source: National Education Association (Maternity Protections and Employees Rights), taken from "Worlds Women" by the UN, (2009), (<http://www.nea.org/home/17029.htm>), 2002-2010

\*\***Note:** The UN TFR ranking is a list of countries by Total Fertility Rate (TFR), ie, the expected number of children born per woman in her child-bearing years. Figures are from the 2006 revision of the UN World Population Prospects Report for the period of 2000-2005 and 2005-2010, using only the median assumption. Only countries/territories with a population of 100,000 or more in 2007 are included. Rank is based on the 2005-2010 figure.

(Source: UN Department of Economic and social Affairs, Population Division, world Prospects: 2006, Table A15, ([http://www.un.org/esa/population/publications/wpp2006/WPP2006\\_Highlights\\_rev.pdf](http://www.un.org/esa/population/publications/wpp2006/WPP2006_Highlights_rev.pdf)), retrieved 7th December, 2009).

### **ANALYSIS AND DISCUSSION OF THE DATA.**

The following points for consideration arise:

1. Women in Africa and other minority countries currently enjoy comparable maternity benefits and privileges with those in developed nations such as those in Europe and the United States of America. (The US, however, does not remunerate women on maternity leave). Nobles (2001) maintains that women, who constitute almost half of the work force in most (nations) still fill only 12% of the lucrative jobs in science, engineering and technology according to data presented by the National council of Research on women. Analysis on paid and unpaid work has led to the frequently used slogan;

*"Women do two-thirds of the worlds work; receive 10% of the world's income and 1% of the means of production"*

Source: Women in the Work Force<sup>1</sup>, Wikipedia (viewed 16<sup>th</sup> June, 2010).

This statement consider uncompensated household labour-for instance childcare, eldercare, family subsistence farming-as well as compensated work in organized labour

2. As occupations become professionalized over the 19<sup>th</sup> and 20<sup>th</sup> centuries, entry of women into most of the professionalized fields was delayed because women were denied entry into universities and qualification for degree. By the 20<sup>th</sup> century, public perceptions of paid work shifted as the workforce increasingly moved to office jobs that do not require heavy labour and women increasingly acquired the higher education that led to better compensated long-term careers rather than lower skilled short term jobs. Marriage bars, (which forced a woman out of work after marriage) were eliminated. Other examples of how gender affects professionalization include:
  - Prohibitions or restrictions on members of a particular gender entering a field or studying a field.
  - Discrimination within a field including wages, management and prestige hierarchies
  - Expectation that mothers, rather, than father, should be the primary childcare providers.

**Note:** These restrictions apply to both men and women, however in practise, norms and laws have historically restricted womens access from particular occupations.

Though data is scarce on the number of women actually engaged in the practice and teaching of architecture, it can be suggested that the level of participation is similar to the known statistics of women in engineering which is less than 18% of the workforce, the highest under-representation of women in any specified field! Louer (2003) even maintains that statistics show that 35% of all architects in training are female, yet less than 10% eventually go into full architectural practice.

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<sup>1</sup> women in the workforce, [http://en.m.wikipedia.org/wiki/women\\_the\\_workforce?wasRedirected=true](http://en.m.wikipedia.org/wiki/women_the_workforce?wasRedirected=true) (viewed 16<sup>th</sup> June, 2010)

3. Contrary to popular belief, extended maternity leaves are not as helpful as they sound. Any "incentive" to delay the return of mothers to workforce would further reduce the amount of cumulative work experience needed to enhance creative ability which is essential in architecture. Recent attempts to adjust the legislation in the United Kingdom to allow for up to one calendar year of maternity leave (to enable mothers spend time with their child during the critical first year), may be retrogressive. This is because any similar ratification by developing and minority populations would have to take into consideration the higher birth and fertility rates of women in such areas. Repeated maternity leaves of extended durations would result in women being further short-changed in development within the workforce with constant improvements in technology. Such women would be rendered redundant when eventually they are able to return to full assignment/duty as maternity leaves do not typically include training, development, upgrade programmes or workshops.
4. Financially, women are also at a loss due to extended maternity leaves. Based on study data from the institute for Women's Policy Research (IWPR), 2004, a full 52% of women in the prime earning age range of 26-59 go through least one full calendar year earning nothing at all, (compared to men with just over 16%) due to commitments to gender-related obligations. The choice to work full-time (over 35 hours a week or more) for the full year even though they are far more likely to take time off work to start a family or work part-time to rear one make a difference over that span: female workers earn just 38% of what men make - making the wage gap twice as large in such economics as that of the United State as given by their census figures. And despite the earnings premium that comes with greater education, women with bachelors' degrees can earn less over 15 years than men with a high-school diploma or less, according to the IWPR. (Fitzpatrick, 2010)

## **CONCLUSION**

*"We hope that...the architectural profession makes a solid commitment to diversify and include more women and minorities..."* A. Ellen Louer, in ArchNewsNow.com<sup>2</sup>

Irrespective of the interpretation of numbers and percentages, economists and advocates alike speculate that factors like discrimination – conscious or not – account for inequalities between men and women in professions such as architecture which are dominated by one gender group. This is despite the fact that women tend to perform better than men in "blind auditions" where anonymity guarantees equal competition by all participants in both the arts and sciences. For women in both developing and industrialized nations, treaties and communiques such as Convention 183 will provide an important security which will guide the development and implementation of domestic laws governing maternity protections. Such implementation, after consideration of local conditions, could set the tone for reform in many other professional fields in which women lag behind their male counterparts.

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<sup>2</sup> Arch News Now.com, [http://www.archnewsnow.com/features/feature\\_100.htm](http://www.archnewsnow.com/features/feature_100.htm) (Viewed 16<sup>th</sup> June, 2010)



## **RECOMMENDATIONS**

The following suggestions arise from this study:

1. It is recommended that institutions of architectural practice and education should embrace policies that foster flex-time, job-sharing and flexi-place, the very workplace programs proven to enhance women's careers. Further research into the issues surrounding women in creative professions such as architecture will bring about more balance in a society that is determined to be more accepting of all genders.
2. International and local legislation need to work hand in hand to ensure that regulation geared towards protecting maternal work conditions and career advancement are not retrogressive. While international law may provide a uniform platform for advancement, local conditions such as average maternal age, birth rates etc will go a long way in adaptation for local conditions.
3. Compensation for women in professional fields who embark on maternity leave should be seen not only in financial terms but also in terms of career enhancement initiatives including the likes of online or virtual training and development, as well as accelerated programs for re-integration and diversification.

## **REFERENCES**

- Benbow C.P, Lubinski D, Shea D.L., "Sex Differences in Mathematical Effekhari-Sanjani, H (2000): Reasoning Ability: Their Status 20 years Later", *Psychological Science*, 2000: 11, 1480-4741.
- Fingelkurts A.A et al (2002): "Exploring Giftedness", *Advances in Psychological Research: Vol. 9*, Huntington, NY, and Nova Science Publishers, 2002: 115-1377.
- Haier R.J, Jung, R.E, Yeo R.A, Structural Brain Variation and General Head K, Akire M.T (2004): "Intelligence", *NeuroImage*, 2004:23 425-433.
- Luders E, Narr K.L; Thompson: Gender Differences in Cortical P.M. (2000) Complexity, *Nat Neuro Sci* 2000:7,799-800.
- Toga A.W., Thompson P.M (2005): "Genetics of Brain Intelligence" *Annual Review of Neuro Science*, 2005:28:1-23.
- Brain Basics: know your Brain, National Institute of Neurological Disorder, [http://www.minds.nih.gov/disorders/brain\\_htm](http://www.minds.nih.gov/disorders/brain_htm) (viewed 13<sup>th</sup> May, 2001).
- Male Vs Female Intelligence: Does Gender Matter? By Alice A. McCarthy (MBA), Health Library, [www.healthlibrerysupport@ebhost.com](http://www.healthlibrerysupport@ebhost.com) (viewed 17<sup>th</sup> June, 2008).
- Equal Pay and The Gender Gap: Men Still Outlearn Women, in *Time Magazine Online*, <http://www.time.com/time/nation/article/0,85-99,1983185,00.html> (viewed 20<sup>th</sup> April, 2010).

Womens e-news: [http://www.womensnews.org/story/women science/011129/more-women-girls-needed-tech-fields](http://www.womensnews.org/story/women%20science/011129/more-women-girls-needed-tech-fields) (viewed 21<sup>st</sup> June, 2010).

“Research says Women can’t Be Top Creative Executives Because They Have Babies” by Jim Edwards,  
[http://m.industry.bnet.com/advertising/10003814/research-says-women-can’t-be-top-creative-execs-because-they-have-babies/](http://m.industry.bnet.com/advertising/10003814/research-says-women-can-t-be-top-creative-execs-because-they-have-babies/), (last updated 1<sup>st</sup> September, 2009).