

A photograph of the Dubai skyline at sunset, featuring the Burj Khalifa as the central focus. The sky is filled with soft, golden clouds, and the city lights are beginning to glow. In the foreground, there is a body of water reflecting the sky and the buildings. To the right, a modern building with a curved facade is visible. The image is partially overlaid by a large blue diagonal shape on the right side.

Dubai, UAE
1-2 November
2016

GAM 2016

6th GLOBAL ACADEMIC MEETING

PROCEEDINGS

6th GLOBAL ACADEMIC MEETING, GAM 2016,
01-02 November, Dubai, UAE

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How The Environment Could Teach. Louis I. Kahn's Architecture

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Abstract

The architecture of Louis I. Kahn changed radically in the 1950s. Such was the transformation that it is difficult to find its unmistakable mark in works so different like the Miesian Parasol House (1944) or the Palladian Fleisher House (1959). All these differences have been widely recognized by leading architectural critics, and some of them even venture to place that process of change while he was at the American Academy in Rome between 1950 and 1951. They are absolutely right in terms of time and place. But the real question arises when it comes to establishing the reasons for such a radical change in his short stay in Rome. The answer, however, is more difficult....

The three months that Kahn spent in Rome as a Resident Architect (RAAR) were really intense. Contrarily to what one might think, he was more a college friend than a Professor. His job allowed him to travel and also encouraged him to do so, so Kahn used to do it a lot. Some of these trips were nearby, but he also made a far journey that got him to Egypt and Greece. This Mediterranean journey is also widely known because of the great drawings he made. Some architectural critics even point out that this trip may have had a potential influence on his late work. But no one has dwelt upon it so far...

Keywords: Louis I. Kahn, Contemporary Architecture, Greek Architecture

Introduction

Louis I. Kahn's architecture changed radically in the 1950s. The transformation was so radical that it is kind of difficult to find its unmistakable mark in the works he made before and after this turning point. For example, we can find this change in two unbuilt houses that the architect designed almost symmetrically to that point: the Miesian Parasol House (1944) or the Palladian Fleisher House (1959).

On the one hand, the Parasol House project (1944), designed in collaboration with Oscar Stonorov, is a proposal for a competition promoted by a furniture company (Kahn 1987). The final result was a composition of five different typologies of houses that were based on the repetition of a single prefabricated element shaped as an "umbrella". This solution could be arranged as a large plane that shaped a continuous and homogeneous space (even in various levels) which also solved the structural problem. Thus, all load bearing walls allowed their structural functions to be overtaken, and the space could be designed just with lightweight materials which could move freely underneath. This means that even the same furniture could be some of these light partitions. The result was a limitless, ambiguous, light and functional domestic space that could be configured independently to the rules dictated by the grid of the "umbrellas".

On the other hand, the Fleisher House (1959) was a private commission. In this case, the house is developed from a large square subdivided into 12 which make up a large central void. In the central space, there are four other smaller squares which form a cruciform heart. Those last squares hosted the "servant spaces" of the house so the other twelve squares could be free of this kind of functions and just work like "served spaces". However, the most important thing of this house is that all of them underline their spatial autonomy through the powerful appearance of its construction made by supporting perimeter walls. This means that there is a high and recognized spatial independence on each of them. So the entire house was set up as a spatial concatenation of autonomous units arranged in a grid in which each house owns its domestic space.

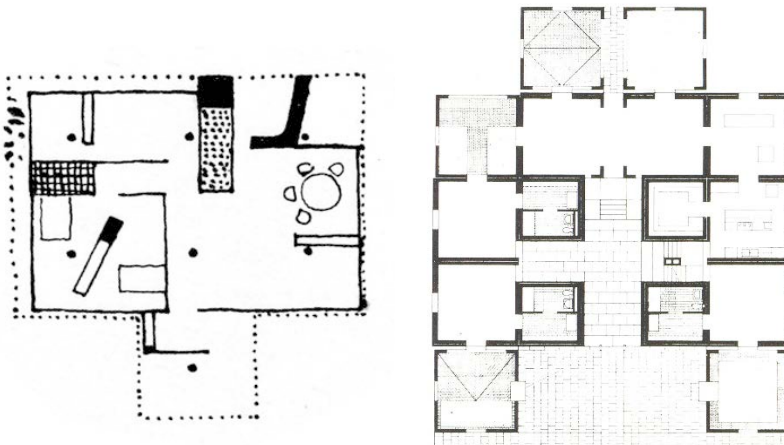


Figure 1: Parasol Houses, 1944 and Fleisher House, 1959
Source(s): Brownlee, David and De Long, David. 1991

If we compare both houses, we can see that the space of the Parasol House is conceived in a centrifugal movement, while the space of the Fleisher House is a centripetal one. While the first example promotes an unlimited, ambiguous and continuous space, the second promotes bounded, clear and closed spaces. If the first proposal asks for dematerialization, asymmetry and functionality, the other calls for gravity, symmetry, and monumentality.

These two examples perfectly illustrate the radical shift in architecture that Louis I. Kahn experimented between the 1940s and the 1950s. This transformation has been widely recognized by architectural critics. Even some of them venture to place that process of change while he was at the American Academy in Rome between 1950 and 1951. And they are absolutely right. But the real question arises when it comes to establishing the reasons for such a radical change in his short stay in Rome. A void that this text will try to fill, at least in part...

The Mediterranean Environment

Fortunately, after many failed attempts in the last years, Louis I. Kahn arrived at the American Academy in Rome (AAR) on December, 1 1950. He went to the AAR to work as an “Architect in Residence” and in that year he was in charge of five Architectural Fellows (Amisano, Byrd, Daltas, Jova, and Dawson) and two Landscape Fellows (Hawkins and Patton). However, he was not a professor for them, at least in an orthodox way, because his duties were just “to act as an advisor” and “to accompany” the Fellows (both Architecture and Landscape) “on occasional trips” (Kahn 1987). And Kahn made a lot of trips.

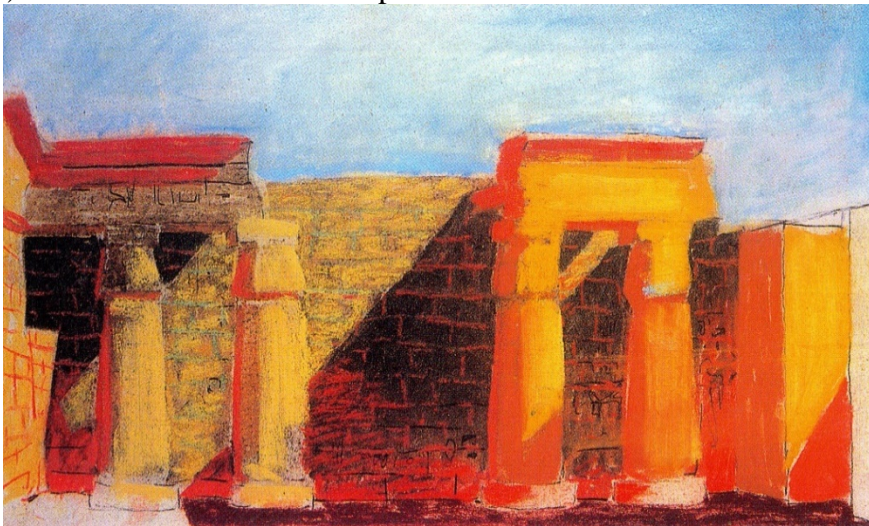


Figure 2: Mortuary Temple of *Ramesses III* by Louis Kahn
Source(s): Hochstim, Jan. 1991

During his first month at the AAR, Kahn and the Fellows made many tours around the Ancient Roman Architecture of the city. Namely, they visited the Imperial Roman architecture guided by famous American archeologist Frank Brow (Brown 1961). Unfortunately, there is no document reflecting the places that they visited, but that year, from what we know, Brown focused on the great Imperial Roman architecture both in the city and its surroundings.. Besides, they also travelled to cities nearby Rome like Ostia, Tivoli, Tarquinia, and even Naples. Nevertheless, the most important trip for Kahn took place in early 1951 with other five Fellows (American Academy in Rome Archives).

Their first stop was Egypt, where they arrived on January 6, 1951. There, as one may well imagine, the group visited the most important places of its ancient civilization (Upper and Lower Egypt). Then, twelve days later, they took a plane to Greece. They just made two trips there, one around the Peloponnese, and another to the Delphi Sanctuary, because Kahn and the Fellows wanted to see Athens in depth. And after ten days in Greece, the group went back to Rome.

This was another important moment for Kahn because, at the AAR, he received a letter from Yale University through which he was hired to design the extension of its Art Gallery, so he immediately bought a ticket back the US. Anyway, he had enough time to make another tour to Tuscany, and he visited Firenze, Siena, Pisa, Lucca and Bologna with some Fellows. Finally, in the last week of February, he also stopped in Venice and Milan in his way back.

Consequently, we can state that the three months that Kahn spent in Rome were really intense, and also that he spent most of the time travelling, painting and studying the same old European architecture that had pushed him to become an architect thirty years before; the same architecture that walked with him for the rest of his life.

This trip collapsed the mental barrier that the International Style had erected in his mind [Kahn's] between the present and the past; in this case, literally, [...] the past that he had loved and he had soaked up in at the University of Pennsylvania returned tumultuously to him: Rome above all. (Scully 2001, 9)

Two Mediterranean Lessons

Louis Kahn spent nearly all January travelling with some Fellows across Egypt and Greece. When he came back to Rome in late January, he found a letter from the Director of Yale University's Department of Art in his mailbox offering him the possibility of designing the extension of their Art Gallery.

This was a great opportunity for an architect, and Kahn realized it right away. As a proof of that, he bought a ticket a few days later to return to his country in late February, being almost short on time to finish his duties as a Resident Architect in the American Academy in Rome.

Once again, fate would smile to Louis Kahn. And not only because this was a great opportunity for any architect, because this challenge was at the same university where he had worked as a professor years before, or maybe because taking this opportunity meant to increase the tight volume of work he had in his office at that time. All these reasons were true, but the main reason this building was special was because he could put into practice all the lessons learnt in Rome, which he couldn't have done twenty years before.

1st Lesson

With the Yale Art Gallery, Kahn showed that he had found his traditional sources, because he introduced the ancient concept of mass that he had learned from the Roman architecture in this work. And we can state that, to a certain extent, this building set off the change for Kahn's architectural work.

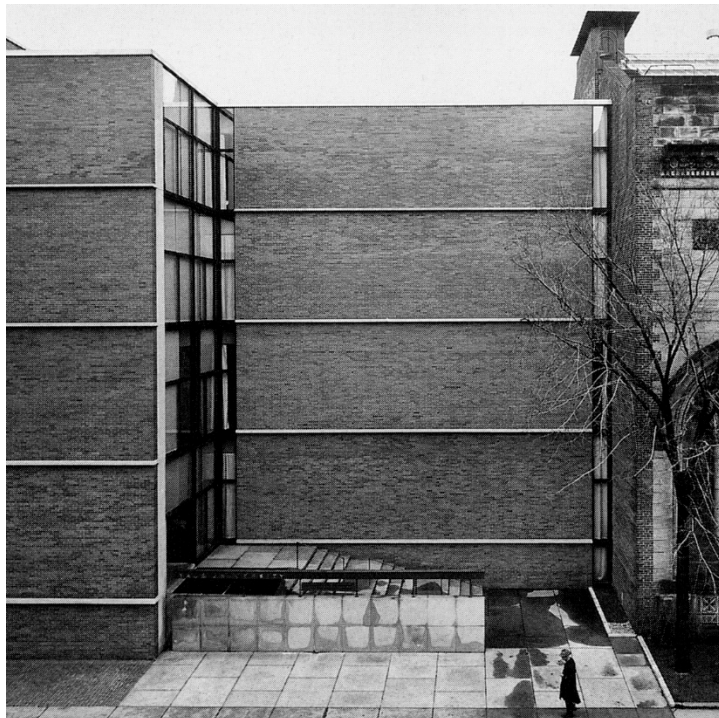


Figure 3: The South-East wall of the Yale Art Gallery
Source(s): Brownlee, David and De Long, David. 1991

At this point, it would be interesting to speak about the large number of walls that there are still up in Rome and its surroundings. Of course, they are in different states of conservation and many of them are anonymous, but there are also other famous ones, for instance, the great Pecile wall in Hadrian's Villa. This thick wall is very similar to the Gallery because both have some horizontal rhythms of shades.

But if I had to point out an ancient Roman wall with a direct influence on the Gallery, it would be the back wall of the Forum of Augustus. I am persuaded that Kahn strolled around it over and over like any tourist could do nowadays.

This is not the time to analyze the idea of this wall –like how this wall separates two important Roman areas– but to analyze its material condition. This wall is mainly built in *opus quadratum* and made up of two grey stones called *peperino* and *pietra gabina*. But it also has three lines made of travertine marble which divide its façade in a horizontal way. Those two elements build up a façade very similar to the Gallery's as we can see by comparing them.

In addition, there are further similarities between these two buildings. If we approach the Roman wall from *via Tor de Conti* across the *piazza del Grillo*, we can see a hole on the upper side. And through this hole we can see the entablature and the first marble columns from the Temple of Mars Ultor.

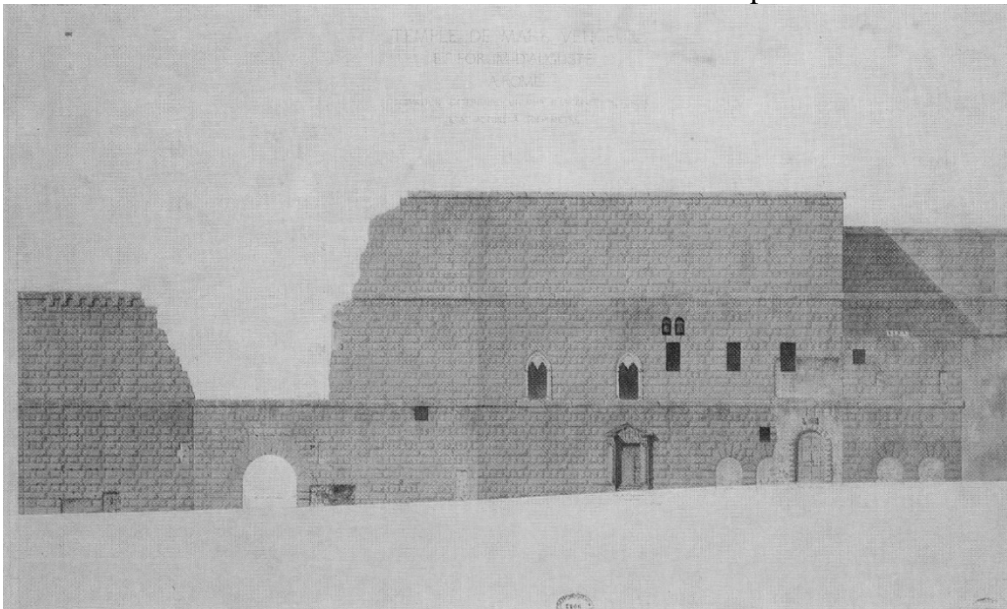


Figure 4: The back wall of the Forum of Augustus

Source(s): Jacques, Annie et al. 1985

In other words, if we think about these elements abstractly, just as pale grey structural elements, we can identify an image very similar to the

Gallery. As a proof of that, we can compare an image of the Forum with the north-eastern corner of the Gallery. Both of them are made up of two different elements. On one side, we have a big blind and grey wall with white horizontal stripes. And on the other side, we have white architrave architecture with voids between its elements, although in the Gallery these voids are pieces of glass, as we can see on the two left side pictures. So in this respect, we can state that they are very similar.

The similarities between the Gallery and the Forum don't end here. If we analyze the plan of the Forum of Augustus, we can see how the big wall is non-structural because it just supports itself. In a similar way, if we analyze the rest of the building, we can see how this temple is built with architrave architecture independently to the wall. And if we look at the plan of the Gallery, we can observe that it is just a wall and some kind of temple. Therefore, in both cases, the walls are just an enclosure element and they don't belong to the structural system of the entire building. The result is as if a white Greek temple had been added to a grey Roman wall

2nd Lesson

So far, we have studied the Roman density introduced by Kahn in the Yale Art Gallery from its wall. But this was not the only place where he radically deleted the lightness of the International Style because he also transferred the previous Roman density into the structure. We can see it on the vertical structure -the pillars-, which simply increased in size. However, the horizontal structure -the slab- was a different thing.

We can clearly see the new shift of the slab on the last version of the Gallery. This new solution included both the construction system and the mechanical requirements necessary for the proper operation of this kind of building. The final solution was the acclaimed and well-known tetrahedral ceiling plan. Despite this form, this slab does not work like a spatial structure, but like a conventional system of inclined "T" beams. Nevertheless, the most important thing of this floor slab is not how it works but how it is built, or rather, what is not built.



Figure 6: The tetrahedral ceiling plan of the Yale Art Gallery
Source(s): Scully, 1962

Actually, the slab of the Yale Art Gallery is built with two elements - inclined “T” beams and inclined shapes- which configure a hollow tetrahedral space without its base. This form is then repeated along the two directions, so finally the slab is formed by a horizontal element based on triangular geometry, its hollowness being its main characteristic. In this way, Kahn designed a hollow structure, and therefore this slab transmits the feeling of lightness. But this is not real because, in fact, this slab is 60% heavier than the necessary one. So the sensation it transmits is “apparent” and unreal, something which he could have observed in Rome and especially in the Baths of Caracalla where “there was the will to build a 100-foot high vaulted structure where people could bathe. Eight feet would have sufficed. It is wonderful, even in ruins” (Kahn 1961, 34-35).

Nonetheless, this system provides enhanced sound quality and also allows the passage of all necessary facilities through their interstitial spaces (parallel beams). And although this is not so well known, it also attempts to be cheaper because it combines multiple systems in one and is left in view.

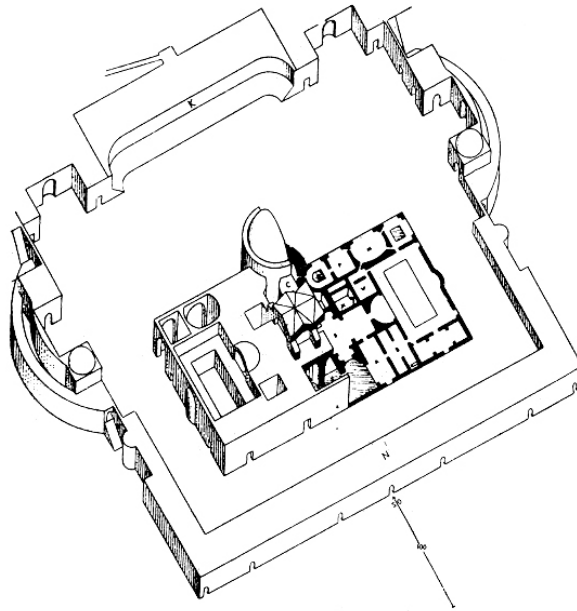


Figure 7: The Baths of *Caracalla*
Source(s): Choisy, 1899

In fact, we can compare this constructive newness with the *hypocaustum* slab built in Ancient Rome that he could see during his trips there a few months earlier (i.e. The Baths of Caracalla). The reason is that this slab also combined two different systems -structure and facilities- in one single element. Similarly, this Roman slab was also a very thick, small-density element because it was hollow so as to allow the passage of the facilities -in this case the heating- as it is the case with the slab of the Yale Art Gallery.

However, the last comparison favors the facilities system over the structural one. But we can also compare the slab of the Gallery with the Roman architecture prioritizing the structural system, for example, with the domes or the vaults built in the Pantheon or in the Basilica of Maxentius, respectively. In both cases, their weight is lightened with coffers and by using a lighter material progressively, without losing the feeling of mass and gravity. Just the same sensation that you have when you are in the hollow slab of the Yale Art Gallery.

So we can state that the hollow slab of the Yale Art Gallery is linked with the essence of the Roman construction, where a single element, in this case a slab, is used for structure, facilities, etc. issues.

Conclusion



Figure 8: First Unitarian Church (1959-67)

Source(s): Brownlee, David and De Long, David. 1991

After more than fifty years, we can state that the new character exhibited by the Yale Art Gallery had a great impact in the whole architectural world. The mass of its wall and the density of its slab was a great breakdown with the International Style's ideals of lightness and transparency.

However, this breakdown was especially significant in Louis Kahn's career as explained at the beginning of this paper. If we look at the next projects that followed the Yale Art Gallery, we can see that this building opened several researches, all of which would follow him for his entire career, as we can easily see from the mass of the Trenton Bath House (1954-55) to the Kimbell Art Museum's (1966-72), or from the density of the Adler House (1954-55) to the Philips Exeter Library's (1965-72).

Nonetheless, these two lessons -mass and density- were not the only ones that Kahn learnt from Rome and the Mediterranean architecture. For example, we can link the space of the Pantheon with the Exeter Library (1965-71), the plan of his Mausoleum with the First Unitarian Church (1959-69), or details of the Ara Pacis with the wood of the Fisher House (1967). But these new lessons will be presented another time...

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Can Be Beauty Calculated?

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Abstract

In this study we focus on three historical concepts of using of mathematical approach to beauty and aesthetic (taste) standard of mathematical thinking in early formation of modern aesthetics of the eighteenth century. The first is Hume's idea of statistical standardization and the significance of rareness and excellence, as a desire for specific positive deviation. Second model of aesthetic thinking is Reid's aesthetic realism. In this theory of taste and art the attention is paid to the study of the parameters and attributes of objects, as well as to the fact that a beautiful object contains cognitively significant information. Those who perceive it are, or should be, able to deal with and understand this information. Important part of these considerations is the analysis of ontological status of beauty and the term of excellence. In the conclusion of this study, we try to highlight the mathematical algorithm of aesthetic standards creation and ideal in Kant's *Critique of Judgment*. We attempt to suggest the potential of all three approaches in contemporary scientific cognitive aesthetic research.

Keywords: Beauty, statistics, standard, taste

Introduction

Beauty and options for its research represent an ancient philosophical issue, combining not only questions of methodology, but also a significant number of metaphysical questions and obstacles. One of those essential questions is definitely: what is beauty and is it possible to objectively examine beauty? If yes, then how?

This study tries to describe three historical approaches to continuity and the mathematization of beauty, which can be identified in the analyses of beauty in the period when aesthetics was formed as an independent philosophical field, and which can be observed in approach to the mathematics of aesthetic experience research even today.

The very first and essential approach to this field is Hume's "mathematization" of taste and his search for objective aesthetic standards.

Hume and Standardization of Standards of Taste

If we are to understand Hume's work *Of the Standard of Taste*¹, we have to take into account, that for the British school² taste is one of the key human intellectual skills³. Aesthetics, labelled *Criticism* in Hume's nomenclature, could have become a Newton-type science if the subject of its research had been the analysis of mind patterns, the ways in which we think or the ways in which we perceive beautiful things and how our mind processes information in this regard. However, some philosophers associated taste with rational skills and a certain natural skill of judgment. As an empiricist, Hume believed that the only way to examine this skill – undoubtedly interesting and important in everyday life – is through experience and observation. It could be either introspection, analysing one's own experience of beauty, or it could be an objectification of the aesthetic experience of other individuals.

Hume was aware that the perception of beauty was connected to sensibility under the influence of Lockean epistemology and Hutcheson's aesthetics. His sensualism results in the fact that the subject of an aesthetic judgment is not something external, but, on the contrary, the impression we perceive as subjects. Therefore, the quality of our perception is not the quality of the object. That leads to polemics regarding the nature of secondary qualities.

Similar to Berkeley, Hume believed that taste judgment, the attribution of qualities to objects, is a result of rational generalization and abstraction. However, it can often be incorrect. That, which is infallible and true, is our perception. Therefore, if we claim that some object is beautiful, we cross the boundary of sensual experience and emotion in our judgment

¹Hume's essay *Of the Standard of Taste* is an elaboration of his ideas from *An Enquiry Concerning the Principles of Morals* and was issued as a part of *Four Dissertations* (together with the essay *Of Tragedy*) in 1757. It is also a reaction to the decision of the Edinburgh Society for Encouraging Arts, Sciences, Manufacturers and Agriculture in Scotland, which awarded the essay of Alexander Gerard „*Dialogue on Taste*“ with the title of “best essay on taste” in 1755 (Hume was a member along with Adam Smith, Lord Kames, William Robertson, Alan Ramsay and Adam Ferguson) which was issued together with three similar dissertations by Voltaire, d’Alembert and Montesquieu in the seventh volume of *Encyclopédie* in 1759 after Hume's prompting (compare: Jones 2011, 431 – 432).

²After Shaftesbury, its main proponents were F. Hutcheson, G. Turbull, J. Harris, W. Hogarth, E. Burke, A. Gerard, H. Home - lord Kames, A. Smith, J. Beattie, J. Reynolds, T. Reid, A. Alison, D. Stewart and D. Hume.

³In the introduction to his *Treatise*, Hume states four basic disciplines – philosophical fields (logic, morals, criticism and politics), describing the mind and its abilities or researching the phenomena that are connected to these skills (compare: Hume 2012, s. 6 – 7).

and we attribute qualities to something that we might perceive incorrectly. Emotion (opinion, *impression*) is the only real and epistemically infallible thing and thus taste judgments should apply only to perception. “*Among a thousand different opinions which different men may entertain of the same subject, there is one, and but one, that is just and true; and the only difficulty is to fix and ascertain it. On the contrary, a thousand different sentiments, excited by the same object, are all right: Because no sentiment represents what is really in the object. It only marks a certain conformity or relation between the object and the organs or faculties of the mind; and if that conformity did not really exist, the sentiment could never possibly have being*” (Hume, 2008, 136). The subject of our thoughts should be thus perception and a certain taste psychology. According to Hume, the ontology of beauty is (referring to Shakespeare's *Beauty is in the eye of beholder*) a matter of impression, it “*is no quality in things themselves: It exists merely in the mind which contemplates them [...]*” (Hume, 2008, 136).

It thus seems that aesthetics are based on perceptions and therefore there is a risk that it must be fundamentally subjective and relative. The reason why it is so lies in the fact that we do not have receptors that are developed at the same level of sensitivity, or they might be contaminated and thus the resulting perceptions can be very different. In addition, we are also very different in the question of preference, and thus “*each mind perceives a different beauty. One person may even perceive deformity, where another is sensible of beauty; and every individual ought to acquiesce in his own sentiment, without pretending to regulate those of others.*” (Hume, 2008, 137). Can a science about beauty and the “pleasant” even exist? Or can we only provide descriptions of our own subjective emotions?

If Hume wanted to give succour to aesthetics as a science, the judgments of which could claim objective validity, he could opt for at least two solutions. He partially opted for both. The first solution was the analysis of “beautiful”, that is, the thing which beautiful emotions and the objects that cause them have in common.

Hume (2008, 134-135) realized that despite the indisputable diversity of our tastes, it is possible to find objects and crafts that appeal to almost everybody in various observation contexts within history and across cultures. These classics are beautiful because our subjective tastes probably have something in common. The “Statistical intersection” of individual tastes could be a solution to the search for a potential general taste if it exists, or at least general attributes of what we like. It is obvious from the nature of his epistemology that what we like are not the objects themselves⁴, but the

⁴“*Though some objects, by the structure of the mind, be naturally calculated to give pleasure, it is not to be expected, that in every individual the pleasure will be equally felt.*” (Hume, 2008, 140).

structure or form of our emotions. And thus we have to rivet our attention to them. However, Hume does not analyse “beautiful” objects by means of certain phenomenology of the perception of appealing objects, that is, what we experience when we like something, or through the intersection of attributes of objects we perceive as “beautiful”, and not even through of our desires (for what purpose do we like something?) when we like something. He pays attention to another aspect of the subjective perception of beauty – its atypicality and *excellence*⁵ in comparison to other, up until that point, aesthetically neutral objects.

The term excellence is to philosophy, special. On one hand, excellence is everything which is not common, that is rare. And thus our preferences in perceiving various aesthetic objects can be rare. Hume is aware that there are individuals who might like things which others do not like or even that disgust them. He assumes that this anomaly in taste could be caused by sickness or an individual oddity. Individual anomalies in taste are more likely to be an error than the standard. Hume expects that the majority would reject such an unusual taste judgment because it is in contrast to a certain generally accepted standards of perception. And here is the core of the issue. We consider everything which is excellent to be beautiful, however, this excellence is considered (or might be considered) beautiful by the majority of those who perceive it. It seems that our nature forces us to search for generally accepted standards of perception in our judgments (Hume 2008, 136). The question is: does such a standard even exist and how are these aesthetic standards established?

We believe that Hume’s fundamentals of aesthetic judgment are more or less mathematical. Hume assumes that perceptual standards as well as standards of taste really do exist. He documents it by the statement that “*If, in the sound state of the organ, there be an entire or a considerable uniformity of sentiment among men, we may thence derive an idea of the perfect beauty; [...]*” (Hume 2008, 140). The idea of beauty could therefore be derived statistically from the unity of feeling of pleasure in the perception of the same object by different individuals, “*in like manner as the appearance of objects in day-light, to the eye of a man in health, is denominated their true and real colour, even while colour is allowed to be merely a phantasm of the senses*” (Hume 2008, 140). But in what manner are the aesthetic standards established?

Regarding the famous example of Sancho Panza tasting wine, it is obvious that our taste is standardized by practice and the quantity of observations. Even individual taste is, in fact, a result of the standardization

⁵Hume uses the term *excellence* in two meanings. Firstly, it conveys rareness – uncommonness as an opposite to usualness (standard). Secondly, it conveys rareness in the sense of perfection.

of judgments. If the inexperienced individual is to deal with some notion, he compares it with the notions he has already experienced and therefore his individual taste might differ from that of others. “*A man, who has had no opportunity to compare different kinds of beauty, is indeed totally unqualified to pronounce an opinion with regard to any object presented to him. By comparison alone we fix the epithets of praise or blame, and learn how to assign the due degree of each.*” (Hume 2008, 140). Therefore, our perception is a standardization of our experiences. Our scale for beautiful and ugly develops with a quantity of material “already perceived”. We consider beautiful, those things, which are not average and in this manner they meet or even exceed the established standards. This is just the first part of Hume’s solution – the less visible one. The second one is the standardization of tastes between individuals.

If our experience is limited to only some types of objects, it is obvious that our taste will be determined and limited by this particularly narrow experience. This is valid for each individual and therefore by sharing aesthetic experiences and taste judgments (and comparing them!), it is possible to rectify the individual taste and thus it is possible to establish generic taste and aesthetic feelings for a community or nation on the same principles of comparison and standardization. The standardization of standards of taste is therefore done on an individual as well as an inter-individual level by the same means.

It could seem that the result of such standardization would, in the end, be an average of the aesthetic judgments. However, we would only face this situation if each person had completely different individual aesthetic judgments. The truth is that we like the same things, thanks to various – for instance historical or social – influences. Thus, Hume believes that beauty is everything that exceeds the standard and therefore (like the Gaussian distribution of intelligence and genius) everything which is (positively) perceived as rare, not only by a single individual, but also by a group of observers. The inter-subjective taste is formed by a process of standardization and synchronization of individual tastes. Practice, education and expert opinions play a vital role in this process.

Hume’s philosophy is often criticized because his definition of taste, as stated by experts – critics – is circular (Guyer 2014, 129; Broadie 2010, 289). However, considering previous thoughts, it is obvious that the relevance of any taste judgment is dependent on the level of experience of the person who perceives it. According to Hume, the opinions of critics are more authoritative than the opinions of inexperienced or partially experienced individuals. Although it would be sufficient, this is not caused only by the expertise of the critic in his field and having incomparably more experience in it and therefore better overview of the matter. The greater and

more diverse set of aesthetic experiences the critic has, the more reliable his judgment is.

The second important factor of Hume's preferences in experts' opinions lies in the subtlety and education they use in their judgments. Hume presents the example of the perception and judgment of flavours (Hume 2008, 142). It is clear that almost everybody is able to identify the significant and common flavours. However, the critic is able to identify not only the rare and uncommon ingredients, but he can also sense them with greater (or greatest) subtlety. It is the subtlety and the ability to distinguish that is necessary for taste relevancy and expertise. The subtle senses and imagination are given by physiology as well as by education and practice.

The task of the experts, for authoritative opinions, is not only to classify and organize our experiences, but for their experiences and subtlety to also compensate for our missing individual experiences, which we are unable to perceive due to our absence of subtle receptors or imagination. Thanks to the value of their experience, our individual standard of experience becomes closer to the expert's standard. We believe that somewhere here (in these mathematical evaluations of individual experience with the experience of experts) lies the source of Kant's ability to distinguish between high and low art and the experts' task for the development of taste.

Thomas Reid and Mathematization of Objects

According to Gordon Graham (2014, 225), Hume's theory of taste expects that our perception of beauty is firstly the expression of emotions, subsequently processed by rational judgments. Beauty is thus something sensed and a domain of emotions. Thomas Reid opposed Hume's epistemology and assumed that our perception is not the perception of emotions, but rather of objects. His epistemological approach is that of a direct realism, influencing his understanding of beauty. Reid does not understand beauty as an expression of emotions originating from notions, but as a real quality of objects which we perceive. "*When a beautiful object is before us, we may distinguish the agreeable emotion it produces in us from the quality of the object which causes that emotion. When I hear an air in music that pleases me, I say it is fine, it is excellent. This excellence is not in me; it is in the music. But the pleasure it gives is not in the music; it is in me.*" (Reid, 1969, 754). He believes that the subjects of our aesthetic evaluation are directly real objects with which we deal by means of

perception. And so the beauty is not in the *eye of the beholder*⁶, but rather directly in the object⁷.

Reid's aesthetic realism implied another possible approach to the study of beauty and beautiful objects – the analysis and mathematization of the parameters of a beautiful object itself. As he states, "*The sense of beauty may be analysed in a manner very similar to the sense of sweetness. It is an agreeable feeling or emotion, accompanied with an opinion or judgment of some excellence in the object, which is fitted by nature to produce that feeling. The feeling is, no doubt, in the mind, and so also in the judgment that we form of the object; but this judgment, like all others, must be true or false. If it be a true judgment, then there is some real excellence in the object.*" (Reid 1969, 599). The sensation of beauty is produced by the qualities of the object and thus beauty can be observed by focusing on qualities like rarity and perfection⁸.

But what is rarity? We assume that in dealing with it, a certain mathematical quality is involved. The fact that a specific object is rare⁹ is based on our ability to deal with its qualities and to compare it with other objects and to come to the conclusion that it is not average or common. Thus rarity presupposes it is uncommon. According to Reid, rarity itself is a natural standard of beauty. Namely, beauty itself is rare. Reid is aware of beauty's diverse forms and that they very often differ from one another, but their uniqueness and exclusivity connects them despite all their differences. It is not just any type of uniqueness, however. At the same time, beautiful things are perfect in their form. While exclusivity presupposes only the ability for statistical calculations between the common and extraordinary, perfection presupposes yet another type of calculation – a determination of a certain inner proportionality, harmony, symmetry and completeness. But there is still the question of which specific attributes are those that characterize the perfection and excellence of the object.

While it is possible to find several opinions on the matter of the ability to differentiate between the separate attributes of the qualities that

⁶For discussion of certain obstacles to Reid's aesthetic realism see: Jaffro 2008.

⁷Reid thus clearly opposed Hutcheson's subjectivist aesthetics stating "*there is no beauty in any object whatsoever; it is only a sensation or feeling in the person that perceives it.*" (Reid 1969, 755).

⁸Jaffro suggests that Reid's aesthetics contain another two interesting levels of research of beauty besides the examination of the qualities of the objects: perception and our natural ability to perceive beauty. We assume that the core of Hume's essay on taste lies in the perception of the pleasant, and the analysis of our ability granted by Nature is a metaphor of foundations of Kant's research of beauty, as we will show later on (compare Jaffro 2008, 136).

⁹Similarly to Shaftesbury, Reid suggests three kinds of aesthetic qualities. Contrary to him, however, he prefers novelty, magnificence and beauty (compare Guyer 2014, 221).

cause the perception of affection in the history of aesthetics, Reid's approach is clear, at least in terms of their existence. Reid believes that as in the same way that we cannot equate colour with the idea when we think of it, colour in fact is the physical quality of a thing that causes our idea of colour, beauty is a real quality of a subject that causes affection in those who perceive it. As far as having knowledge of it is concerned, though, he is more reserved and states that "*in objects that please our taste, we always judge that there is some real excellence, some superiority to those that do not please us. In some cases, that superior excellence is distinctly perceived, and can be pointed out; in other cases, we have only a general notion of some excellence which we cannot describe.*" (Reid 1969, 760). Therefore, Reid believes that certain attributes, which make objects beautiful, can be clearly identified¹⁰. This specific approach is the method of choice for a part of cognitive aesthetics¹¹.

Kant and the Cognitive Basics of Aesthetic Judgment? The Idea of Standard and Mathematical Composition

Reid's attribution of cognitive aspects to aesthetic judgments seems to be in contrast with Kant's requirement for intellectual purity in aesthetic judgment. Kant is considered to be a philosopher who rejects any rational interventions in taste judgments¹². Pure aesthetic judgment is a matter of reflective judgment (in contrast to a defining one) which is deprived of terms or intellectual purposes.

If we look into Kant's thesis about beauty and ideal, we will come to the conclusion that the idea of beauty is a rational and the ideal is a vision identical with this. But how do we come to the ideal of beauty? A priori or empirically?

In his *Critique of Judgment*, Kant suggests a notable psychological explanation: "*Notice how in a manner wholly beyond our grasp our imagination is able on occasion not only to recall, even from the distant past, the signs that stand for concepts, but also to reproduce [an] object's image and shape from a vast number of objects of different kinds or even of one and the same kind. Moreover, all indications suggest that this power, when the mind wants to make comparisons, can actually proceed as follows, though*

¹⁰"A work of art may appear beautiful to the most ignorant, even to a child. It pleases, but he knows not why. To one who understands it perfectly, and perceives how every part is fitted with exact judgment to its end, the beauty is not mysterious; it is perfectly comprehended; and he knows wherein it consists, as well as how it affects him." (Reid 1969, 574).

¹¹In the case of music, we identify its beauty in expression, in the beauty of melody and in the beauty of harmony (Kivy 2010, 274).

¹²On the other hand, he preferred the thesis of beauty's role in mathematics until 1790, however, he later rejected it (compare Wenzel 2001).

this process does not reach consciousness: the imagination projects, as it were, one image onto another, and from the congruence of most images of the same kind it arrives at an average that serves as the common standard for all of them" (Kant 1987, 82). What is more, from the image of the standard origin of a handsome man's stature, Kant specifies in his analysis of the origin of the standard idea: "Someone has seen a thousand adult men. If now he wishes to make a judgment about their standard size, to be estimated by way of a comparison, then (in my opinion) the imagination projects a large number of the images (perhaps the entire thousand) onto one another. If I may be permitted to illustrate this by an analogy from optics: in the space where most of the images are united and within the outline where the area is illuminated by the colour applied most heavily, there the average size emerges, equally distant in both height and breadth from the outermost bounds of the tallest and shortest in stature; and that is the stature for a beautiful man" (Kant 1987, 82).

Therefore, the standard idea originates from an unconscious mathematical calculation. The unconsciousness is documented not only by the mentioned conviction about *the real comparison* (though *insufficient for the consciousness*), but also by Kant's note that "The same result could be obtained mechanically, by measuring the entire thousand, adding up separately all their heights and their breadths (and thicknesses) by themselves and then dividing each sum by a thousand. And yet the imagination does just that by means of a dynamic effect arising from its multiple perception of such shapes on the organ of the inner sense" (Kant 1987, 82). It could be said that this act is carried out intuitively with an unspoken algorithm for the solution (Démuth 2009). However, Kant clearly unfolds this mathematical algorithm. Our creation of aesthetic standards is tied to mathematical operations of which we are unaware because they are performed by the imagination.

Nevertheless, the significant issue is whether it is done on the basis of previous experiences (as suggested by Hume) or *a priori*. Although Kant states that the creation of the ideal is determined by previous experience (according to Kant, the Chinese ideal is different to the European one) based on the perceptions that one might encounter in his or her environment. This fact is valid not only for the standards of human physique, but for all aesthetic standards and patterns (for instance the standards of horses, dogs, etc). On the other hand, at the same time he says that "*this standard ideal is not derived from proportions that are taken from experience as determinate rules. Rather, it is in accordance with this ideal that rules for judgment become possible in the first place*" (Kant 1975, 73). The creation of an

algorithm of aesthetic standards probably takes place *a priori*¹³, but its material is obtained by experience.

Nevertheless, there is Kant's other remarkable note, "*the standard idea is by no means the entire archetype of beauty within this kind but is only the form... Nor is it because of its beauty that we like its exhibition, but merely because it does not contradict any of the conditions under which a thing of this kind can be beautiful*" (Kant 1987, 82). What is more, he suggests an example in a footnote: "*It will be found that a perfectly regular face, such as a painter would like to have as a model, usually conveys nothing. This is because it contains nothing characteristic and hence expresses more the idea of [human] kind than what is specific in one person*" (Kant 1987, 82). However, as the numerous observations of psychologists and cognitive scientists show, people perceive faces that are the closest to Kant's described average as a standard of beauty as beautiful. This knowledge has been well-known since the times of Galton and his almost Kantian experiment with the composite images of criminals who were more attractive than the faces of individuals, but it was proved by repeated observations carried out by Langlois and Roggman (1990) and by many others (Perrett 2010, Rhodes 1998, 1999...). The explanation of why we like faces which are close to or identical to faces created according to the Kantian standard is not only mathematical, but also evolutionary. However, the fact remains that throughout the history of art (for instance in the Baroque period) opinions can be found that for "perfection", the perfectly average and symmetrical face very often requires the violation of symmetry and the average by means of a certain beauty spot which would make the object distinctive and unforgettable.

Kant's theory of the ideal paradoxically represents (concerning the overall anti-cognitivism of Kant's aesthetic judgment) a model of the creation of aesthetic standards and ideals by acquiring composite individual experience. Kant thus offered a potential insight into the unexplored secrets of cognitive aesthetics, into the creation of algorithms of aesthetic experience and judgments. The applicability of this approach is documented not only by numerous studies by contemporary cognitive psychologists and aesthetics, but also by the evolutionary reflection of the significance of beauty for the individual from the point of view of a beautiful object's participation in the creation of an ideal or type norm and the issues connected with it. At the same time, he made it possible to consider aesthetic experiences as a dynamic mathematical operation, which allows him to extend his views to other fields of perception and thought.

¹³Similar to "A judgment of taste rests on a priori bases" (Kant 1987, 67-68).

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Disruption is the Core of Everything

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Abstract

Using disruption as a release of order is among the most common and effective strategies of today's media world. Media content has facilitated to experience a sense of chaos, excitement and utopia so alien to nowadays rigid every-day life. Media content interacts with its viewers via multiple channels such as social media, magazines, billboards, cinema, radio, TV, gaming as well as events (just to name a few). Media and its advertising offers today's audience a portal for 'dreaming and making it big' without any risk or effort, for becoming a star without any talent, in short; for a disruption of ones own reality and celebration of ones own (in)significance. Now this escapism of media and its advertising is not something new but the need for innovative ways to disrupt the audience's reality has grown exponentially in recent years.

For this reason, it is important that researchers, media developers, advertisers and consumers become aware of the nature of media content and its impact. Researchers are in a unique position to help consumers understand the impact of disruption in regards to media content. How can one remain a healthy lifestyle, practice healthy expectations of life and be satisfied by what one has rather than by what one could have? The emergence and practice of media content and its advertising as a utopian tool of capitalism is the anti-movement to any real or religious values.

Keywords: Media content, media, advertising

Especially advertising which is often described as 'disruptive' and its impact is not simply another influence that can be overlooked. Yet the interaction between advertising and its audience defines who we are as a society; dismissed by most academics as simply a tool of promotion of a product or service (Shimp & Andrews, 2010).

Even if the audience is not paying attention to the advertising itself the subconscious influence and capacity is vital for our understanding of the interaction between the medium and the human psyche. In a world of constant disruption and overload of information...what role does effective

advertising play? How does subliminal advertising work? How is it still practiced? Is interaction the key of any effective advertising?

In this paper I will argue that an analysis of advertising, understood as a welcome disruption of one's own every-day life and extension of one's own hopes and dreams, can bring us closer to an examination of our self-created and life-reassuring media utopia.

Advertising established itself as a platform, which, from the outset, stimulated and manipulated its audience by making them perceive, receive, interact and buy into a certain product, service or celebrity image. The audience is encouraged to interact and strive for a better image of themselves no matter if physically or mentally. Not only adults are put under this ever-rising pressure but also children and vulnerable teenagers. But is it really pressure? Or are we simply observing the development of our time to reach for more, want more and take more without asking? Is advertising simply an extension of our own wishes rather than caused by external factors? Is it us who have changed from within due to the luxury of the Western world? Do we need to strive to live happily? Do we need to get disrupted to feel alive?

If one watched advertising content a virtual illusion of celebrity status, perfection, is provided and perceived by the audience. In the past observing and celebrating was enough yet today the audience wants to BE the star rather than celebrate the star. Advertisers have used this knowledge to their own promotional advantage. For example social media competitions are the ideal collection of data in combination with the celebration of stardom hype. The competition is often accompanied by a celebrity ambassador who intensifies the importance and prestige of the competition and encourages everybody to become part of it: to make your dream come true!

Even though the audience might be aware of the small chances of success the effective advertising persuades the viewer 'to buy into' the competition and the associated product or service. The viewer becomes his or her own star in their own movie. One could argue that this attitude of 'you can achieve anything' is an extension of the American Dream. This attitude has been adopted by many viewers worldwide and serves as an ideal platform for promotion and data collection. Only if you believe in your own success can you be successfully advertised to. Potential self-proclaimed stardom is the soil on which nowadays advertising world is building on and harvesting its greatest achievements (fruits) from. If you consider yourself a star all you need is the right product and service to promote your unique talent and show the world what you are made of. Realistically we are living in a sea of stars with a small amount of perceptive audience members.

It is important to remember that the introduction of advertising as a platform towards stardom has economic as well as artistic consequences. A

competition that 'goes viral' is far less expensive than billboards on highways and the association with stardom a welcome tarn-cap for any promotion. The 'obvious' advertising has lost on appeal. It is the (I call it) 'tarn-cap adverting' that hides behind an agenda that gets our attention. Also this tarn-cap advertising can be applied to many products and services. It is flexible and can be easily changed to cater to the needs of our time and latest fashion trends.

Academic critics reinforce the sense of advertising as being utopian (Simon,1980) but in reality the relationship between the audience and advertising is less than utopian but mere schizophrenic. The audience seems to be unable to distinguish anymore between what is real and what is unreal (similar to the ability to imagine a film set beyond the frame and therefore extending the physical appearance of the portrayed).

Ads that show a framed image set in its natural environment indicates how a snap-shot can manipulate the viewer to assume one thing whereas the extended surroundings tell a different story. Imagination seems to be deleted among young viewers. We consume what we see and seem not to question anymore. This passive behavior of the audience gets played with in the media and shows the media generation that not everything perceived within a frame truly exists. Our life is dominated by categorizations, assumptions and image. But what about if the image does not portray the true self? The paradox is obvious, the viewer gets often surprised and disrupted by his or hers own presumptions. The most common reaction is an internal smile...as if the media has caught on to its audience...has shown us our own mirror image of assumptions.

Advertising and the media love to take things out of context by not only making products or services look more desirable but to surprise the viewer by his or her own active interaction and association. Only the ones who pay attention get rewarded. Only the ones who actively perceive the advertising can win. It is like a never ending game show with different levels...we can never defeat the dragon called advertising...there is always a new version with more tricks and innovations. We strife for imaginative advertising, we enjoy imaginative games...as we have lost our imagination in exchange for passive consumption or predictable interaction with a product or service. Nevertheless the social media generation regardless of its consumption often gets bored by the same tricks...so advertising has to innovate itself to entertain rather than only to hold up a poster billboard and say: 'this is the best product ever!'

Subliminal advertising is one of the most interesting yet controversial practices of advertising. In some countries such as Australia and Britain it is even forbidden. One form of subliminal advertising is to interject a frame of for example the image of Coke into a movie. Now, for the viewer to actively

recognize this Coke ad is nearly impossible but the subconscious has perceived it and some researchers argue that therefore sales of the product will increase. 1957 market researcher James Vicary announced that repeatedly flashed slogans of ‘Drink Coca-Cola’ and ‘Eat Popcorn’ throughout a movie, too fast for conscious perception, would result in a rise of 18% increased popcorn sales and 58% Coke sales. A similar practice was used during the Bush campaign...where a TV ad flashed the word ‘Rats’ in reference to democrats. The multi-million dollar ad was taken off air.

We have to be aware that the subconscious is more important in decision making than often the conscious. For example KFC uses the smell of fried chicken outside their diner to attract customers, McDonalds uses certain bright colors to attract customers when they are hungry but at the same time their seats are far from comfortable so that you quickly leave after you had your meal, supermarkets play certain kinds of relaxing music to increase sales and have installed bumpers on the floor to slow down your trolley and therefore pay attention to certain products...aren't these also sort of subliminal influences?

In education we strive for engaging all senses of our students. Hear, see, smell, touch and taste. To engage is to perceive, to perceive is to understand, to understand is to remember. Obviously this tactic has been adopted by advertising. One of the most successful campaigns nowadays are events such as the Coke happiness vending machines. Here the consumer can interact with the product and event itself. Hear, see, smell, touch, taste it and not to forget share the experience on social media. The happy spirit of the event becomes part of the product...and becomes memory (Puntoni & Tavassoli, 2007). In an overflow of information and advertising it is this disruption of every-day life that makes the potential consumer buy into the product.

In the old days one would only buy what one could afford or truly needed. Nowadays slogans like ‘treat yourself’ or the famous L’Oreal slogan ‘because I’ m worth it’ have become part of our every-day-life-rewarding-system and inflated ego. And not only this...parents are using the reward system for the motivation of their children. ‘If you do this...you get a treat’. It is simple advertising. Even motivation needs to be advertised nowadays.

A lot of e-commerce businesses complain about the enormous web traffic in contrast to the actual purchase rate. Websites get checked out but the actual ‘turning visitor into buyer’ is a 10 to 1 challenge. Key is to engage...key is price...key is labels...key is promise...key is disruption.

It is not that this lifestyle has been forced upon us...it is just a learning circle of disruption and excitement of a new things that we can own....yet the actual physical purchase plays a small role in contrast to the excitement of buying and disruption of every-day-life. The illusion of

owning over admiring is short lived though. Most of the purchases end up in the back of closets and get quickly forgotten. The active purchase is what gives us ecstasy and not the actual product itself. Of course the increasing pressure of looking good and make-over shows such as *Extreme Makeover* (that can include plastic surgery) have added to this trend...but most of the time it is the disruption that makes us happy.

Nowadays, even infants wish for a credit card and not for a pony anymore. A credit card is the ultimate luxury, independence, freedom of choice and key to disrupt ones own life in the way one wishes for. Fast food chains have not gotten so successful thanks to the quality of their meals but thanks to their advertising, excitement and not to forget toys that accompany their meals. In the old days McDonald's handed out cards for a monthly free burgers to European kids. These kids were used to home-cooked meals and their parents would not have allowed them to spend money on something they had been provided with at home. It is the buzz kids felt when they entered McDonald's, the bright colorful environment that attracts kids subconsciously, the clown as a brand ambassador, the excitement of being independent, the thrill of getting something for free and not to forget to celebrate the American way of life and endless opportunities. In the movie *Breakfast at Tiffany's* the main character likes to visit Tiffany jewelry store because 'nothing very bad could happen to you there' (Edwards, 1961). Well the same you feel when you visit a McDonald's kids party. It is an extraordinary smart marketing strategy that paid off. When these kids grow up most of their best childhood memories will be associated with McDonald's. Some researchers argue that McDonald's food makes addictive and films like *Supersize Me* (Spurlock, 2004) show the health effects of consuming fatty McDonald's food. Nevertheless, this does not stop the general public from consuming and loving McDonald's. In fact even anti-ads are ads at the end of the day and the forbidden fruit still carries fascination and tastes a little sweeter. No matter what your beliefs are, one has to admire McDonald's for its smart implementation of marketing and advertising to a new generation.

T.G.I Friday diners are flashy in design, the menu represents the American way of life and dream and their staff is fun, young and energetic. 'Thank God it's Friday' can be celebrated every day of the week. In a way this is an insane idea...but it taps into our illusions and need of happy moments during our hamster wheel existence. Now please do not get me wrong. I think these chains have figured it out...and we as academics need to admire their creativity and imagination. It is not those chains who made us who we are...it is our dreams and hopes that made us who we are and how we live.

It is also important to reflect on the combination between advertising and art. In relation to other art forms, advertising is a combination of art and marketing. But isn't all art a combination of art and marketing? Economist Bianca Baker once said that "an item is only worth what someone is willing to pay for it". It would be hypercritical to say that advertising is less worthy of art than art itself. Advertising is just like art and often judged by its actual worth rather than creative quality. Art and advertising need to push boundaries...consistently...otherwise both end up in either dusty museums with little visitor traffic or being ignored. I would argue that advertising is pop art at its best. Pop just means popular and advertising has indeed become popular.

This article will explore the complexity of advertising through the analysis of some case study exercises wherein advertising's unique expressive potential may be observed. I use the terminology of advertising as a whole since I believe it to be important to reflect on the psychological reality of the process. Critics are familiar with the basic principles of advertising but very little analysis has been given to the psychological reality of the advertising content, which obviously raises valid questions that should be incorporated within any critical examination for the advertising experience.

Advertising content has been broadcasted beyond the Western world...in fact advertising is one of the oldest traits of the world (Sampson, 1874). The innovative intentionally disruptive character that gets perceived as entertainment seeks to give a sense of excitement to a world in which everybody has everything they want. It is the dream behind the ad that makes it so three-dimensional like a trusted character (or aunt) who tells you what is best for you? This created an intimate calling that one could compare to the of religious callings in the past (for some). A certain presence of the ad embedded in ones own life, wishes, dreams and reason for life itself. Whereas the ad converts the represented product or service into the end of the rainbow, the golden pot, the answer to one's prayers the religious calling converts ones dreams often into a delayed nirvana after death. For an impatient generation such as ours dreams are getting robbed of their initial purpose of being a good man or woman. Suddenly it is all about ruthless stardom and ones own buying power that gives gratification. Whereas dreams and hopes were used in the past as motivation to work hard while being a good character, nowadays dreams and hopes are used as catalyst of objects. Dreams and hopes have lost its own original dimension and have become slaves to worldly goods.

When interviewing a team of a top advertising company (name confidential) they rejected the idea that advertising was a mere catalyst of dreams and hopes. They saw it as an artistic extension of promotion. One

employee mentioned his background in the arts and how it could not support him and his family. Advertising was a welcome division between the arts and business; one that one could live of. It would be hypercritical to question such an approach, as we all need to live and feed our families. Nevertheless, the healthy balance between consumption and life quality without worldly goods need to be achieved. In reference to my research I created sort of anti-ads for fictive products to research the response. My tweets and website titles included statements such as ‘don’t buy this’ or ‘worst product ever’. The response was quite astonishing. People felt curious about the ad and product, were entertained by it and wanted to own it. It was something different, it disrupted the normal flow of promotion that promises more than it can deliver and therefore became a novelty. This phenomenon is similar to the warning signs on cigarette packets; rather than sales declining (due to the newly added warning signs) sales for cigarettes increased. The forbidden fruit is an appeal of its own. Once again originality rules disruption. And disruption rules consumption.

For my research I undertook a survey with a class of young primary school kids. I asked them what they wanted to become when they grow up and why. Around 60 percent of all kids answered “rich” rather than a specific profession. When asked why they confessed that when you have money you can do whatever you want. Freedom, the disruption of every-day life via travel and ‘many people who you can pick from’ seemed the common answer. This is a very dangerous development of our time. It was not so much the actual profession kids admired e.g. becoming a doctor or lawyer to help people...it was the outcome of being rich and therefore fulfilling all your dreams (in their eyes). This illusion is being reinforced and repeated over and over again via media and advertising. You can only be loved if you have what it takes...and what it takes is money.

The CEO of the advertising company mentioned above took time to talk to me. He mentioned that the goal of advertising is to love your product, to fall in love with it and remain in love with it over the years. The *Lovemark* movement started by former CEO of Saatchi and Saatchi Worldwide Kevin Roberts reinforces this idea of creating products and experiences that have emotional connections with consumers (Roberts, 2004). I collaborated on my research with Facto Saatchi and Saatchi and interviewed numerous advertisers. I was surprised by how much in love most advertisers were with advertising itself. For them it was a shire extension of society at large (rather than the other way round). Another advertiser felt frustrated that advertising was always being blamed for the lazy attitude of passive youngsters and consumerism. Why had advertising such a bad reputation?

It is important to reflect on advertising YouTube comments – it shows advertising fans that celebrate the story behind the ad more than the

actual product. Comments like ‘this ad will make you cry 100 percent’ or ‘most touching ad ever’ or ‘funniest ad you will ever watch’ indicate that people are unaware of the subconscious effect these ads have on their buying behavior. Advertising content has become entertainment and entertainment is what stimulates us and makes us buy into things. Advertising as entertainment rather than unwanted disruption of films or TV series is still in its infancy and it is important that we explore it as much as we can and identify its downfalls and potential benefits.

Advertising and its online popularity raises crucial questions about advertising as entertainment and the need for it. We must ask ourselves whether advertising is the answer to our stressful yet mostly banal lives and acts as a counterpart. Whereas many attempts have been made to analyze advertising, surprisingly few media communicators or media critics have paid attention to the rise of advertising’s expressive forms, meanings and entertainment factor. Early advertisers, media communicators and psychologists recognized advertising and its unique potential on the human brain...but somehow advertising as entertainment remains less explored. When talking to neurologists, psychologists and researchers they mentioned the very complexity of the brain. Nowadays media researchers can measure the brain activity and focus points of the audience while watching the screen. Market researchers take pride in adjusting Hollywood movies to the taste of the audience and focus point. Websites collect data on how long a visitor stays on one page and what buttons he or she presses. So should we not somehow explore these facts and findings more and put them in context with advertising and media content?

I believe that this liberation of advertising as entertainment rather than unwanted content and its use can bring us closer to an exploration of what our society wants and needs to feel good – and what better research is there to concentrate on? The introduction of advertising as a respected and scientifically proven outlet for the social media generation requires ambassadors to stand with it, explore it and celebrate it. The fact that advertising was temporary motivated by sexualized primitive content to draw attention to itself should not overshadow its great entertainment factor.

Therefore I undertook a case study research whereby I asked my students to present three of their most adored advertising clips on YouTube. My research seeks to explore the relationship between advertising with nowadays young media generation. I will argue that we must acknowledge that advertising has its unique expressive form and that effective use of advertising as a unique form of entertainment will lead us to a more honest way of perceiving our hopes and dreams.

I first thought of using selected advertising from different eras but then decided against it as it was the NOW that I wanted to concentrate on. What and why would my students select certain advertising content.

The students presented their videos and it was extraordinary how some of them had chosen the same YouTube ads as others (regardless of the vast amount of online advertising available). Whereas the female students often had chosen ads that told a touching story the male students had chosen ads, which included elements of action and jokes. At first the students were very skeptical of the research. Nevertheless they became more open to it and when they started to notice the pattern of their own choices. They were so excited and asked more people to participate in the research. In the next session I noticed that some female and male students rejected to be categorized and after having heard of our research and findings, they had purposely chosen ads that were in contrast to their gender predictions. Nevertheless, this was simply an anti-movement and just as predictable. Often their choice of cloths had already given me (as the researcher) an indication of their choice of ads as entertainment. Their choice of favorite music and movies also reflected what they would 'go for' and potentially buy. Facebook collects data from all of my students (including gender, age, favorite music, movies, travel destination, ect.) and I asked them to tell me their favorite bands and I ended up to predict with a 67 percent success rate ads they would like and what products they would buy. Facebook is free but each member gives so much more than it gives back. Facebook data can be shared with advertisers and therefore potential consumers more easily identified and targeted. Data is currency in the business world and advertising is a simple extension of taste.

The research showed that the longer the students were exposed to the ads the more they gravitated to own the product or service portrait. Had we watched McDonald's ads I would find my students in the nearby McDonald's. Advertising is all about repetition; even the students who had sat in the back and were more interested in their phones than the lecture had been subconsciously influenced and now ate a Big Mac.

My own predictability should be mentioned too. I am conscious of how my own opinions and assumptions of the world (when portrayed in an ad) grab me and make me subconsciously buy into a specific product. The *Dove* self-esteem ads for women and young girls for example are not only in line with my ideas but extend creatively my opinions. In these ads women of all sizes are being portrayed and self-esteem used as a marketing tool. When an ad taps into your own thoughts and executes them creatively there is no stopping it – it will become part of you...in fact it was already part of you before you saw the ad itself. The product itself will be a representation of your own opinion and a statement to others. There is a certain sense of

release and pride when you buy a product that is an ambassador for what you stand for and who you are or want to be. It is your style, your life and your beliefs. All stress gets forgotten and a sense of peace gets achieved - similar to a missing puzzle piece.

Further some students were suffering under shopaholic behavior, maxed out credit card bills yet an angst to let go of any products owned. It was as if the products had given them a sense of peace and calm so very seldom in nowadays world and generation. When their favorite ads were perceived they became relaxed, they tapped into their image reality and all every-day life worries were forgotten.

When I was a student and my school visited East Germany (just after the wall had come down) I noticed the lack of advertising at the communist walls. Some of my friends had felt panic attacks and anxiety by the sight of NO ads yet after some days they relaxed and I noticed that they would let go of their excessive beauty regime. A lack of ads must feel like detox to some. Ads have become so much part of us that it is hard to separate from them. They are like comforting friends, which are there for you as long as you can pay for them and which make you distinguish yourself from others and celebrate you.

After the exercise the students were asked to buy no name products...brands they had never heard of and bring it to the classroom. Many students brought fizzy drinks and compared the taste blindfolded. Only around 32 percent could tell the difference between Coke and No-name Coke. When I told them that a lot brands differ only via package rather than content...they did not believe me. Advertising had done its job...very effectively. Nowadays books are being judged by its cover, people hired via their image and food rated by its price tag. Novels like '*Kleider machen Leute*' 1874 (translated from German 'Cloths make People) by Swiss author Gottfried Keller challenge the idea how people are judged by their cloths rather than by their character. After the exercise some of my student started to question content via image...yet the machinery of adverting is part of our society...and advertising is not to be blamed for such a development. It is us as humans who have decided that we want image over content, we even demand it! I believe that is development is worth researching and exploring. Maybe humanity needed a step back from intellectual progress (in terms of advertising and profit).

It comes as no surprise that the use of adverting to increase profit and margin within our image consuming and hooked media generation results in great business. Nevertheless it is up to us to question it and make our young generation aware of its downfalls.

It seems impossible to write about advertising without mentioning its great power on the media generation and the outlet of stardom and VIP

status. When a banal life-style becomes too boring– advertising kicks in – like a new life philosophy. There is not great power in reality anymore - but there is great power in advertising. It seems as if the media generation cannot stand simple every-day life anymore - it is alien to them. Constant and distracting information represents the key and new religion. Entertainment has become their guru. Entertainment has replaced religion (for some). Relaxation means to shop (consume). Ethics are only considered worth it when from financial advantage. Promises are not being kept (similar to the advertised products which promise so much but give so little when bought).

The challenge is to see advertising as what it is. In fact we do not know what it is...we can just feel its influence. Most of what we feel cannot be explained or pinned down. This does not mean that we should ignore it or condemn it. It should be explored, researched, enjoyed as long as it does not harm our own sanity and the of others. For us to explore consumer behavior or advertising content would be an endless and never ending task. Fact is: we buy who we are.

Conclusion

Advertising has often been dismissed as nothing more than ‘disruption in the name of capitalism’. Nevertheless, advertising has somehow gained popularity and even cult status among the social media generation as a sort of celebration of the utopian dream that can be bought. Advertising is accused by theorists as being submissive and manipulative (Fennis & Strobe, 2010). Very little supporting evidence has been condemned without a fair trial to the footnotes of any academic study of the impact of advertising as a popular art form and extension of our hopes and dreams. It is true that when advertising became more popular (and especially with the introduction of TV ads) it was guilty of sexualizing content to achieve attention. Nevertheless, advertising has been gradually liberating itself from the suggestive narrative and content, divorced from sexual assumptions but celebration of the psychological effect and reality of advertising content which has outgrown its bad reputation.

It must be remembered that Advertising is pushing boundaries similar to avant-garde art (meaning ‘before the crowd’). Therefore advertising should be granted a sort of freedom of speech...or freedom of advertising. The industrial revolution highlights consumerism as a new religion and reason to live. Many of the arguments and concerns expressed at the arrival of the industrial revolution and its new developments and way of life provide new insights into the evolution of Western society. Advertising, how it is created, perceived and how it is distributed and its effects might be one of the most fascinating developments of our time and summarizes our society at large.

The industrial revolution era, its flourishing communities and luxury goods now available to the society at large was characterized by an overwhelming advertising content supply and pressure of interactivity and availability and an economic exploration of the unique qualities of the medium. Advertising content creators were marketers, graphic designers, painters, film directors who continued to turn advertising in an art from rather than just marketing tool. This creative team of advertising challenged advertising content and revealed its unique expressive and artistic potential within the marketing environment. More recent artists realized greater sophistication through using advertising creatively.

TV and cinema ads, billboards, magazine ads, promotion events, Internet advertising remain the most dominant representation in advertising. Is this because the audience can understand and feels reminded of a sense of harmony and completeness when purchasing a product or service? Is it a comfort to believe in the illusion that if you owned this particular worldly good your life would be perfect?

Whereas many critics argue that Advertising (Handelman, 2009 & Phillips, 1997) is similar to manipulation, I argue that it is a representation of our time and values. Manipulation in contrast is a passive experience whereas the advertising effect is an active perception followed by an active purchase of life quality. Advertising's original motivation was to promote, to make life better. Undoubtedly advertising's representation of the world and the media is an illusion, an utopian aspect of life. People need to understand its purpose, its influences, its subconscious manipulation. Only then can we enjoy the benefits of advertising as an entertaining art form that contains subliminal messages. Only if you know what advertising is and how it works will you be open to it and celebrate it as what it is – a mere recipe of life – but as all good cooks know...you will need to tweak the recipe to cater to your own taste. My research has shown that people need goals to live a happy lives. No matter if these are realistic goals or not. But goals. Advertising are providing these goals...as solutions. A phenomenon that is new to the advertising world. It was extraordinary to interview the kids and collect the results of what they wanted to become...of what life should look like for them to be happy. They were conscious of the research and collection of data but free to answer. Some of them felt ashamed to admit that they wanted to become rich whereas others were just convinced of the necessity of money to live a happy life. The audience is learning how to interpret nowadays advertising – similar to religion – yet rather than goodness and kindness advertising can (but does not necessarily have to) promote shire capitalism. It is an embodiment of capitalism, a conscious collecting and spending of money in the absence of any ethics.

I wonder what the future will bring to Advertising or more what our communities will bring to advertising. I wonder if Advertising will disappear and be replaced by even more effective achievements of peace and harmony and a fulfilled life. Or if it will be continued and more widely embodied as the answer to our prayers and our lives. After all, it is a huge breakthrough and ambassador of consumerism but will the illusion last? As we all know...in advertising and product offerings...nothing ever lasts. To remain still means the death of advertising.

Theorists seem to ignore the audience' s newly gained codes of perception of Advertising which are a result of the social-media forums we inhabit. Never before in history were we as exposed to media and content as we are now. Advertising is a learned language of consume and stardom resonated by social media. If Advertising is a unique language then I would argue here that it reaches its greatest sophistication in the communication between its content and its young audience members. Maybe it is the sort of advertising education and consumption during a young age that conditions us into becoming good spenders, maybe it is the even the advertising sounds that we hear as embryos. Fact is that from the beginning of our existence (and even before) advertising is part of our world just like food and water.

Similar to all media content traditional, mainstream Advertising needs to continually reinvent itself; embodying contemporary cultural, technical and communal developments and advancements. In my belief Advertising has to remain indefinable, unpredictable so that it can be experienced, enjoyed so that the audience gets disrupted by it and entertained by it. The brain is still very much unexplored. Though our anthropological facts cans of viewers and consumers summarizes our lived facts. Fact is, advertising works when it disrupts.

In contrast to many theorists I would strongly argue that Advertising is valid to be considered as a historical, psychological, cultural, artistic and anthropology phenomenon. I believe that we have to embrace the new born Advertising content and allow it to gestate within an evolving, sophisticated and innovative media environment. It is this innovative approach that allows it the means to continue to develop and move us and disrupt us. Advertising is new to being a recipe for life. It is a capitalism philosophy and art from that is dependent on technology, media but most of all audience attention - yet it is not being exclusively perceived as such and its gained mainstream popularity should not delude from the fact that it is after all an illusion. What is beyond the frame is what counts. I predict that the advancement of future advertising will contain more disruption via relaxation. Its nature is to stimulate and cater to the needs of our society. Advertising as well as life itself are in a constant state of evolution and the informed critical and practical response to this evolution will, I believe, result in an extension of

the artistic palette of the advertising artists and bring us closer to the essence of how media can be used not only as a demanding but also giving platform.

Key is to unplug our generation from time to time...so that they can see a world beyond consumerism and practice real ethics.

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Innovative Mindset in School Education: A global issue or trend in Pakistan?

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Abstract

Education and training are emerging now key drivers of competitiveness for any country on the globe. To cope with the globalization a country has to elevate her education system. In Pakistan HEC upgraded the Teacher Education (TE) by replacing the one year B.Ed. with the 4 year B.Ed (Honors) recently. The upgraded TE and the global challenges are well connected with the real implementation of vision 2030 agenda in the School Education (SE). And crucial to address the advancements in TE for the production of teachers with innovative mindset to grip the global reach in the future. The Punjab government is planning to stop the upgraded 4-year program offered since 2009 in the 33 Government Elementary Colleges for Teachers Training (GCETs) instead of making the GCETs self sustain. The study with the mixed methods of research visualized the advanced professional training needs and essential global demands data from the 33 GCETs including 33 (100%) principals, 330 (82%) teacher- educators and 200 (66.6%) prospective- teachers. Then it strived to propose a transformation mechanism for the elevation of TE. The data analyzed quantitatively by frequencies, percentages and qualitatively through focused group discussions, triangulation and content analysis. Study designed to resolve the globalization issue, by bridging the gaps through a transformation framework for modification in TE. The conceived factual framework is a dynamic revolutionary route to improving the quality of school education via contemporary TE. The suggested framework if implemented would save the scarce resources and provide maximum outputs through quality education.

Keywords: Global advancements, TE, SE, Dynamic Transformation framework

Introduction

We are living in the revolutionary era of information technology with swift advancements in every walk of life. The concept of the global village is now transformed into a global table. The blast of electronic media along

mobile gadgets has also altered the way of social living, modifying the pattern of acquiring knowledge and learning. Schools, as well, should respond to such advanced societal needs. And consequently, schools must re-think and re-emphasize the development and implementation of a new curriculum and pedagogy. As mentioned by Shah (2004), “that schools should develop and reform their curricula in a way that produces the necessary human capital capable of holding up to the government's growing economy and growing population, along with identifying viable solutions for such crucial and vibrant needs”. There is a dire need to adapt globalization wisely rather making it an unresolved issue.

The key findings of the 2015 EFA Global Monitoring Report (GMR), Pakistan has not reached any of the Education for All (EFA) goals set in 2000 with measurable targets. To improve the quality of education, 4 million more teachers are still needed. The trained teachers remain in short supply in one third of countries; in several sub-Saharan African countries, less than 50 percent are trained. However, education quality has received increased attention since 2000 and now with the major focus in the vision 2030 agenda.(GMR –Report, 2015).

According to the vision 2030, under the caption, “The Teacher for the 21st Century” Teachers are the long pole in the tent of education in school to higher education. Having good teachers can dramatically affect the quality education. The teacher numbers are inadequate in schools and colleges, and their background lacks both solidity and diversity; they are also paid very little. From a policy viewpoint the primary objective would be to attract better teachers, and secondly to improve their overall quality. Better salaries and facilities will produce the desired result. Teachers must be enabled to acquire a decent measure of ‘self-esteem’. This has happened in universities and it must now be implemented with even greater emphasis on the school level. (National Economic Council, Vision 2030 paper, 2007).

Rationale

In present scenario of Pakistan, there are more than thirty six percent (36%) children, out of school at primary level. Numerous funding agencies and foreign aids have worked on the enhancement of a quality education through increased enrollment, high literacy rate, improving infrastructure, and significant teacher training, to provide a suitable learning environment. But only short term benefits and improvements were achieved through such make ups. That is true and prevailing situations. (UNESCO, 2015)

The truly required efforts are not made because the root- causes are ignored. Ultimately the problems reappear with high intensity, if the solutions are temporary. And sometimes the institution, itself, is connected with the root causes of the problem as Chubb and Moe argued, that

institution being a part of the problem cannot solve the problem alone. (Chubb, Moe, 1990)

The same situation exists in the Pakistan as in the province, Punjab, there is urgency for good governance and effective management that includes innovative reforms the education system through teacher education institutions (TTIs). Whereas in Punjab School Education Department (SED) privatized more than four thousand schools and stopped the 4 year B.Ed. (Honors) in the 33 Government Colleges for Elementary Teachers (GCET) , instead of making them self sufficient and self sustain to supply an excellent lot of teachers. The study attempted to conceive a research based dynamic transformation process to resolve the existing issue.

Literature Review

The first and most important thing is that no education system can be better than the quality of its teachers. The most successful countries, from the Far East to Far West are those, where teaching has the highest status as a profession. All the evidences from different education systems around the world show that the most important factor in determining how well children do is the quality of the teachers and the teaching. The core of the education system, the Teacher Education, (TE) is the most neglected and ignored areas in Pakistan. It does not even receive the sympathetic attention for the sake of country's future growth and sustainable development. That explains why our TTIs are not well equipped to prepare quality prospective-teachers, encounter the global demands. (education.vermont.gov, n.d.)

The best education systems in the world draw their teachers from among the top graduates and train them rigorously and effectively, focusing on classroom practice. They then make sure that teachers receive effective professional development throughout their career, high social status, opportunities and other benefits. Considering the teacher education as the mother of education systems, the policy makers, planners and the politicians in our country should give highest priority to teacher education for the sake of a robust and sustained education system, but the situation is reversed in Pakistan. Many researches recognized that there are too many teachers who lack knowledge of the content, pedagogical skills and need CPD to address the demands of their advanced-learners from the modern age of technology. (undp.org, n.d.)

According to the ministry of education, In Pakistan the total teacher training institutions(TTIs) are 147, with 3232 teachers- educators in the public sector and only 23, with 266 teachers- educators in the private sector. (AEPM, 2011-2012).

In both sectors the limited teacher training institutes face the challenges of preparing the prospective- teachers for new generations and

utilizing the advance learning theories and acquired modern pedagogy. Both need curricula revise and wise planning with budgetary proficiency for adapting the global advancements. The required advancements can be tailored locally according to the needs for preparing quality prospective teachers. (TE.net.Pk.n.d.)

Teacher Education: Present Scenario in Punjab

There are 40 teacher training institutes (TTIs) in different universities and 33 Government Colleges for Elementary Teachers Training (GCETs) for pre-service and in-service teacher education in Punjab under the directorate of staff development (DSD). The present status of TE in the public sector of Punjab is not up to the mark, to encounter the global advancements and survive in the vibrantly changed social environment. (Shah, 2010)

The NACTE established National standards for accreditation of pre-service teacher education programs offered in the country by defining the essential components and aligned the standard framework. The consultants were hired and the consultancy was done. Finally the consensus on provincial and national level was developed in June 2009 and in July 2009 the standards were approved by the NACTE. (NACTE, 2009)

It was a forwarding phase of quality education as the quality assurance needed professional standards of teacher education. The ministry of education in collaboration with UNESCO implemented the STEP (Strengthening Teacher Education in Pakistan) project that was supported financially by USAID. Under the Pre-STEP project, the national professional standards for teachers (NPST) were developed.

Accreditation, Teacher licensing and (NPST) initiatives: New Global Trends

The process of TE program accreditation, teachers licensing and certification in advanced countries like U.K, Australia, America and Canada was also consider in Pakistan and, NPST and national accreditation council for teacher education (NACTE) were developed by HEC in 2009; the process of the teacher licensing and function of NACTE is still under consideration at the upper level. (HEC, 2009).

Upgrading Teacher education and Good Governance

In Punjab, there is urgency for good governance, effective management and a control mechanism that includes innovative reforming the education system through (TTIs), making them eligible to compete globally. And the expenditure on education should clearly be more than 2.5%. (Planning commission 2012-2013).

Statement of the Problem

The globally competitive quality education is the agenda of vision 2030 for the economic growth and sustainable development of our country. There is a dire need for a dynamic transformation mechanism to adapt the global advancements through quality teachers. The study addressed the globalization and its required reforms through a dynamic transformation mechanism in school education.

Objectives of the Study

- To collect, need assessment data for global advancements adaptation from the GCETs.
- To analyze critically educational documents and budget allocation for globalization.
- To propose a conceived factual framework for transforming teacher education in Punjab.

The Research Questions

Q1: What are the demands of principals, educators and future teachers for the global trends?

Q2: How the education policy, NPST, new curriculum and budget allocations are aligned with the global demands?

Q3: How, where and why to bridge gaps locally with the advanced global interventions?

Significance of the Study

The study has grand weight for the school education department (SED). The suggested dynamic transformation process is a research based and the proposed academies will be an excellent source for achieving the vision 2030 targets. The transforming framework if implemented can be very supportive in boosting the economic growth through quality education.

Methodology of the Study

The study employed the mixed methods of research by focusing the quantitative and qualitative aspects. The population was comprised of 73 Teacher Education Institutes in the public sector of Punjab. Among which, the 40 (TTIs) are working in universities as autonomous bodies and the 33 Government Colleges for Elementary Teachers Training (GCETs) are working under the directorate of staff development (DSD) and school education department.

Sampling

The 33 GCETS, (45%) of the population was selected as purposive random sampling. The representatives of both genders i.e. male and female were selected randomly. All the principals (100%), among 402 teachers-educators (SS/SSS) only 330 (82%) and among 506 prospective -teachers only 200 (39.5%) were selected randomly. The reasons for the purposive samplings were to include the people of central interest with particular characteristics, i.e., the TE in the public sector of Punjab. As viewed that, “key informants can be used to find purposive sample”. (Barany 2006). “Both random and purposive sampling can be combined to produce a powerful sampling”. (Albertan, Nair, 2004).

Instruments of the Study

Three types of questionnaires for principals, teacher educators and prospective teachers were utilized. Focusing the qualitative aspects the other instruments were: i) Focused group discussions with teachers- educators and prospective- teachers. ii) Semi- structured interviews with Principals. iii) Classrooms observations. iv) Check lists. The pilot testing was done and the 3 types of questionnaires were constructed; each item was revised accordingly. Thrid draft was finalized with the help of experts in the field of education

Data Collection and Analysis

The frequencies and percentages were calculated for each statement. Then triangulation of data was done with three variables. The document's critical analysis was done along cost benefit analysis ratio (CBR) in budget allocation by the questions; i) Is the analyzed document updated for the demands of globalization advancements? ii) Is there any identified implementing authority existing or not? iii) What are the practical aspects of the documents regarding local and global considerations?

Data Triangulation Interpretations

Table.1: The ranks A-E with the scale value 5-1

Various options in the questionnaires	Scale Number	Assigned Ranks
Almost totally, Expert, Strongly Agreed, Excellent	5	A
Quite almost , Very Good ,Agreed ,very Good	4	B
Moderately. Competent ,Not Know, Good	3	C
Slightly, Modest ,Disagreed, Fair	2	D
Not at all, Needs improvement, St. Disagreed, Poor	1	E

The all respondents were at rank A and B for adapting global advancements. Ranks D-E are obtained for all the respondents in English communication, use of IT, computer skills,(SBT), global citizenship

skills, critical, analytical and creative thinking etc. A major finding was a serious change is required to bridging the traced gaps for quality education.

Table.2: Content analysis matrix

Respondents In GCETS	How Important High - Medium - Low	What They Demand as a global trend	How it should be done
Principals	High	High respect & status, Good governance, more funds and autonomy, own fund generating, skills, Activities and projects. Leadership growth and development mechanism required for globalization.	The ownership, respect, skills and strategies achieved by revising the setup as autonomous bodies. Diagnostic foreign tailored trainings with the continuous feedback & follow up.
Teachers Educators S.S/S.S.S	High	Need based tailored trainings are required for the intellectual-growth, command on collaborative pedagogical skills. HEC Revised curriculum & recognized TE programs, High social-status along incentives. Diagnosed training in science, social studies and mathematics on a cyclic basis. The outlines designed on the Training Need assessments (TNA) on misconceptions taught through latest interactive pedagogy.	Notification of High status, pay equal to ministers, Special field researches by prospective teachers supervised by teacher educators as in (SBT) and (SILT) to know the ground realities in school education. School improvement plans..Strictly follow the NPST for expertise in the subject, quality education and teacher licensing. A mechanism for global advancement adaptation is must at local level.
Prospective Teachers	High	Trained teachers-educators, up-dated, approved interactive curriculum by HEC, well equipped science, computer labs with internet, good infrastructure.	Conducive and secure learning environment with all required facilities and infrastructure, Adding new subjects and Multigrade teaching in the curriculum.

The content analysis conceived that the main aim of TE is to promote the innovative mind set, intellectual growth and moral dispositions in the future-teachers through innovative pedagogy. There is a need for adaptive-trainings to nurture the intellectual growth and wisdom through reflections, discussions and active engagement in the critique of knowledge and practices at class room level.

Findings

The findings from three types of variables was summarised as:

The almost all the Principals (97%) said, the principals are the vital policy implementers so they need autonomy, latest trainings; sufficient

budget, more staff in IT and sciences. The better infrastructures along basic resources are urgently needed. The institutions should be autonomous to deal with complex role and responsibilities in the combined GCETS & DTSC.

The majority (89%) of teachers-educators said, they should be involved in developing and revamping the curriculum. The diagnostic training should focus the policy actions, NPST, accreditation. The best venue and weather make the trainings more effective. The follow up should be a major component of said trainings. All the prospective teachers (100%) pointed out the need for open-minded administrators along expert teacher-educator's team. The activities like Practicum and SBT should be well managed. Advanced management services with latest equipments and infrastructure should be provided immediately.

Considering the findings and analysis a research based factual framework was conceived and suggested a dynamic transformation process with the rationale given in the following focal points.

i. A Genius Amalgamation of DSD, GCETS and DTSC

The research proceeded by collecting the need assessment data, analyzing the policy demands and budget allocation along cost per student and teacher student ratio. Considering all the ground realities along the sake of quality education the amalgamation is genius and indispensable.

ii. Growth within the Available Resources and Cost effectiveness

The logical justification is that, the highest escalation and production within the available collective-resources. That can be effectively utilized to serve for the quality SE. The proposed academies will provide maximum outputs with multidimensional services.

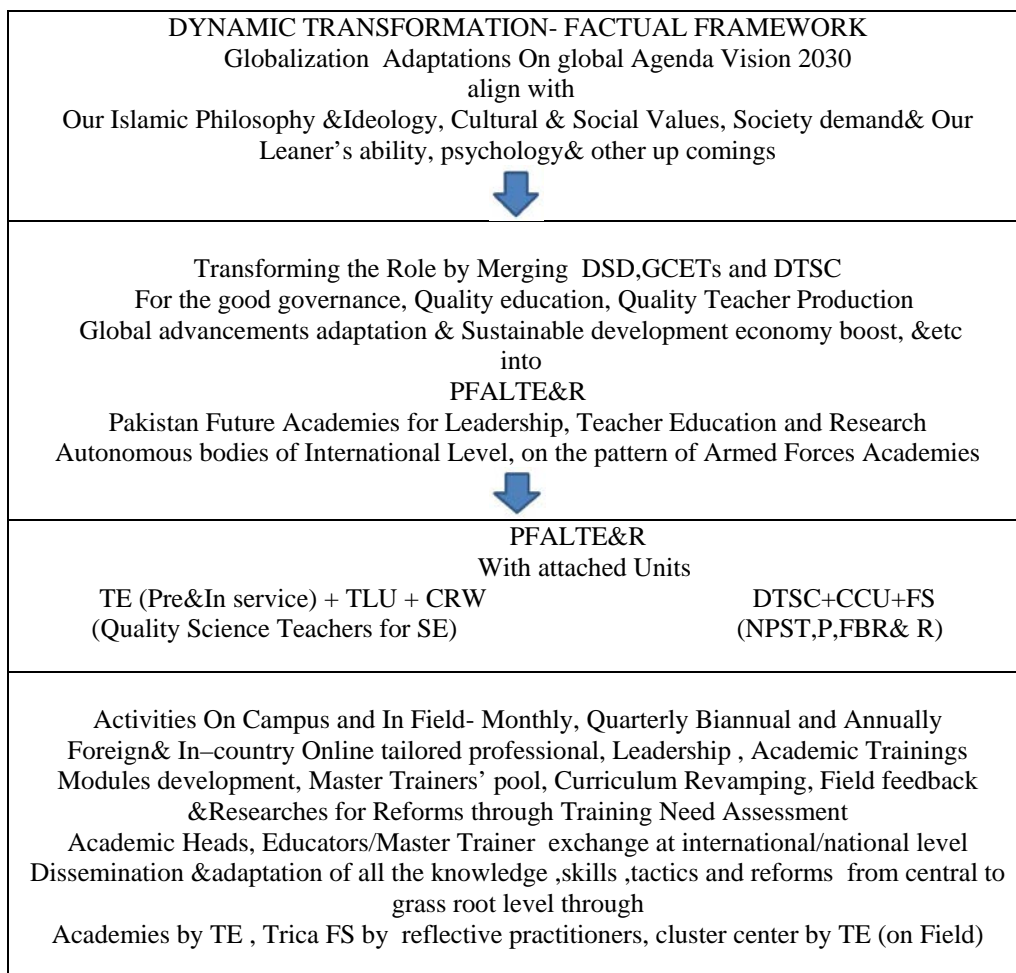
iii. Saving of Limited and Scarce Resources

Considering the calculated cost benefit ratio for the Islamabad and Rawalpindi GCETS campuses that was 300000-700000 per student respectively, for the year 2013-2014. And the total budget allocation for the DSD, DTSC and all GCETS, was 4.5 billion that year. 99 million were allocated to all the GCETS the remaining is utilized by the DSD and DTSC. The merged academies can serve better and save more than 2 billion rupees annually. As the quality assurance reports and third party evaluation is not in the favour of DSD and DTSC.

Conclusions

There is dire need to transform the existing TE system in public sector of Punjab instead of closing and banning the new TE program. To cope with the global market for maximum economic growth a versatile leadership and innovation mind set in school education is the demand of the

day. The researcher suggested a research based conceived dynamic transformation framework given on page no13:



Note: The Regional level total 8 Academies 4 for boys & 4 girls at Islamabad, Lahore, Multan and Bahawalpur. The 21 GCETs converted into Academies' Sub- Campuses as Training & Model Higher Secondary Schools serve as Feeder center to preparing (8th -12th class) quality-stuff for the regional Academies to prepare Future Science teachers for SED.

ACRONYMES

CC	Cluster centers
CPD	Continuous professional development
CRW	Curriculum Development wing
DTSC	District Training and support center
FS	Family Schools
FBR& R	FeedBack & Reforms
NPST	National Professional Standers for Teachers

P Practicum (Teaching Practice/Putting theory into Practice)
PFALTE&R Pakistan Future Academies for Leadership, Teacher Education and Research
TLU Teacher Licensing Unit

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Seniority Principle in the European Labour Market with Emphasis on Slovakia

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Abstract

Income is without doubt an important indicator reflecting status of a person in the labour market. By comparing the wage dynamics decomposed by age groups, we try to reveal whether there is the seniority principle promoting accumulated working experience and skills in older age, or whether older people in the European countries face age discrimination in terms of earnings. Looking closely at the case of Slovakia, we point out the misinterpretation based on stereotypes about poor employment situation of older persons. In fact, median-age to pre-retirement age cohorts show less inactive and less unemployed persons compared to young generation. However, this is true only when considering employment rates. As regards income development, in average, older people can rarely expect their wage to rise with age. This is not just the case of Slovakia; the seniority principle in terms of earnings vanishing across the EU countries, particularly in old member states.

Keywords: Seniority principle, labor market, employment, wage, decomposition by age (age groups)

Introduction

Implementation of the seniority principle is, in addition to employment and unemployment rates, an important indicator of the status of older people in the labour market. This is important particularly in the context of the results of several previous Eurobarometers, according to which age is one of the most significant factors of potential discrimination in the labour market. Respondents of the Eurobarometer (European Commission, 2015) are more likely to say that age discrimination is widespread on the basis of being over 55 years old rather than being under 30 years old.

Negative stereotypes regarding older people can result in greater discrimination in redundancy situations, lower participation in training and

development activities, problems with promotion or in situation when older employees get less pay than their younger colleagues for the same work, which all together gradually undermine their position in the labor market. Age itself can be seen also as one of the main obstacles for becoming re-employed. It is therefore necessary to pay attention to whether the wage increases with age or not, because theoretically being longer in practice and in a certain workplace should lead to higher individual human capital and to at least moderate wage growth. Some of the previous studies which have been already done on this topic (e.g. Pudelko, M., 2006) suggest that seniority principle is losing importance and that the “American-style performance orientation serves as an important source of inspiration”.

The aim of the article is to reveal whether the seniority principle is present in the European Union (EU) countries and to use the case of Slovakia to characterize employment status of older workers and to examine their potential income discrimination by selected aspects. We compare pay differences among given age groups in international and national context. The methodology of comparison is based on “wage” as a proxy (for average earnings by age groups in each country) calculated to the “wage index” where the level of earnings in the youngest age group (under 30 years) represents the base (index =100). In this paper we use last available data decomposed by age (2014), however the analysis is also based on the results of the previous study (Bútorová et al., 2013) in which the international and national analyses were conducted on data of 2006 and 2005. For purposes of this paper we consider only the narrow content of the “seniority principle”: changes in income with age. The advantage of the simplified approach is that age is the only factor determining differences in the level of earnings. The disadvantage of this methodology is that we do not distinguish to what extent the wage differences depends on the differences in productivity gains.

International comparison of differences in earnings by age

Eurostat statistics do not provide data on earnings by age group for all EU countries but nevertheless, major trends can be identified. The data obtained from the analysis suggest that when taking into account average annual earnings in the national economy (considering only productive age), the seniority principle still exists in the countries such as Spain, the Netherlands, Slovenia or Cyprus (Table 1). Both Slovakia and Czech Republic belong to the group of countries which are characterized by having lower earnings in 50-59 age group compared with two younger age groups.

In comparison with the previous years the weakening of seniority principle can be found in some old EU countries, e.g. Germany. This reflects the unfavourable situation of older people in the labour market in terms of wage improvements. In case of Slovakia, it is obvious that the structural

changes which economy has undergone during its transition significantly disadvantaged older people in the labour market. Empirical data for Slovakia showed that seniority does not bring considerable wage increases, which suggest that older age groups attained qualification (as the sum of two components – education and experience) under the different economic conditions and they were not able to overcome their handicaps from the previous period.

The level of earnings in the 60+ age group is likely a reflection of the significant national differences in the career-ending. This age group consists mostly of those individuals who remained economically active after reaching retirement age. This factor is very important for the level of earnings and it suggests that people who stay in working process are those who do not have any serious health problems and have required qualification which enables them to remain in the labour market longer. At the same time these are individuals whose earnings are relatively higher compared to those who after reaching retirement age or shortly thereafter retire. Therefore earnings in the oldest age group are overvalued compared to other age groups. Implicitly, it can be assumed that those people who retired earlier were less successful in the labour market and had lower qualification and lower earnings.

Table 1 Wage index by age groups – national economy (less than 30 = 100; 2014)

	Less than 30	From 30 to 39	From 40 to 49	From 50 to 59	Over 60
BG	100	118	113	107	101
CZ	100	127	125	118	127
DE	100	150	166	164	147
EE	100	122	113	97	88
IR	100	131	145	139	116
ES	100	129	145	154	166
CY	100	143	167	176	x
LV	100	121	107	96	95
LT	100	125	113	107	109
HU	100	125	122	118	136
NL	100	156	179	180	177
PL	100	135	142	130	149
SI	100	123	133	134	186
SR	100	131	125	114	128
FI	100	122	132	129	129
UK	100	146	158	150	133

Source: Own calculation based on Eurostat data.

A more detailed analysis of wages in manual professions indicates that the differences in earnings between age groups are lower compared to the differences over the entire national economy. This is also true in case of

Germany. If Germany stands as representative of a developed country, it is important to note that earnings in the 30-39, 40-49 and 50-59 age groups in manual jobs are almost identical (Table 2).

In several new EU member states (e.g. Slovakia, Czech Republic, Latvia, Estonia, Lithuania), lower average earnings of manual workers were found in the 40-49 and 50-59 age groups compared with the age group of 30-39 years olds. Hungary appears to be more conservative country with the profile of income distribution by age similar to that of Germany.

Results of the international comparison of wages for manual workers indicate that seniority is likely to remain of importance in Cyprus and in the Netherlands (in case that we take into account people in working age, i.e. under 60 years). These results are consistent with conclusions of some previous studies done in this field, e.g. with Allinger (2016) who found that the impact of work experience on a person's net income has been drastically reduced in the last 20 years and this means that average income profiles have been flattened, particularly among blue-collar workers.

Table 2 Wage index by age groups – manual workers (less than 30 = 100; 2014)

	Less than 30	From 30 to 39	From 40 to 49	From 50 to 59	Over 60
BG	100	106	113	111	100
CZ	100	106	105	101	104
DE	100	131	130	129	109
EE	100	102	95	86	75
IE	100	115	127	124	110
ES	100	114	118	124	142
CY	100	114	119	130	120
LV	100	104	93	91	82
LT	100	103	97	93	88
HU	100	105	105	106	115
NL	100	142	150	151	147
PL	100	111	113	108	106
SI	100	107	107	105	103
SR	100	107	104	99	95
FI	100	110	112	109	103
UK	100	122	127	125	113

Source: Own calculation based on Eurostat data.

In the next part of the article we continue with the analysis of earnings by age in white-collar jobs. The analysis of data related to non-manual professions has shown significant differences between countries that are likely to be a result of an impact of a range of institutional factors.

Table 3 Wage index by age groups – non-manual workers (less than 30 = 100; 2014)

	Less than 30	From 30 to 39	From 40 to 49	From 50 to 59	Over 60
BG	100	124	116	107	101
CZ	100	135	133	126	137
DE	100	156	178	177	164
EE	100	129	121	103	96
IE	100	134	149	142	114
ES	100	134	157	170	185
CY	100	149	181	191	180
LV	100	126	111	100	103
LT	100	130	119	115	118
HU	100	128	126	122	141
NL	100	155	183	184	184
PL	100	142	156	142	167
SI	100	126	143	143	198
SR	100	139	134	124	139
FI	100	124	137	134	135
UK	100	150	164	156	142

Source: Own calculation based on Eurostat data.

It can be observed, that one group of developed countries (e.g. Spain, Cyprus, the Netherlands) is more seniority oriented, while in the second group of these countries (e.g. Germany, UK, Finland) earnings in the 50-59 age group are slightly lower than in younger age group (from 40 to 49 years).

As regards the new EU member countries, Slovenia belongs to the group of countries with the traditionalist type of remuneration where seniority system plays important role. But even in this country the weakening of the seniority principle can be observed, as in 2014 the difference in earnings between the 40-49 and 50-59 age groups significantly decreased compared with the year 2006. V4 countries (except Poland) belong to those countries where earnings were the highest for those aged 30 to 39 years (taking into account only the productive age).

Univariate analysis revealed in the EU countries following tendencies:

- Compared to the year 2006, the weakening of the seniority principle has occurred also in some old EU member states, regarding the remuneration the age group 50-59 years is seen as the most vulnerable.
- In the new EU countries foreign investors often require mainly medium skilled-workers, younger blue-collar employees who are physically fit and are more likely to work on irregular schedules – younger people are often placed to such job positions, they have stable and high productivity, which allows them to obtain even higher earnings compared to older employees.

- The differences in the application of the principle of seniority in the EU countries are affected by the number of factors. It is necessary to mention cultural habits or institutional factors, which means stronger trade unions (e.g. in the Nordic countries) and the tradition of social dialogue in remuneration (which can still, to some extent, manage to protect older workers against deterioration of the wage level).

Employment status of older people in Slovakia

Older people form majority of total active population in Slovakia (for purposes of this article “older” means population older than average/median age, i.e. population aged 40+; in 2015, average age of population in Slovakia was 40.13 years and median age 39.40 years). As it can be seen from comparison based on division of economically active population by standard main age groups, population aged 50 years and more represents app. one quarter of total economically active population in Slovakia (table 4). Age structure in older cohorts is quite even: each 5-year age cohort between 40 and 60 years comprises a little more than one tenth of total active population. Together with persons older than 60 years, they (40+) represent more than a half (51.9 %) of total active population in Slovakia (consisting of 1.4 million individuals). Of which 25.5 % of total active population are persons aged 40-50 years and 22.5 % represent people aged 50-60 years.

TABLE 4 Structure of economically active population by age groups (2015)

Main age groups (Years)	Level (Thousands)	Percentage of active population
15 - 24	209.1	7.6
25 - 49	1805.8	65.9
50 - 64	703.8	25.7
Older cohorts in details		
40 - 44	374.3	13.7
45 - 49	324.0	11.8
50 - 54	322.1	11.8
55 - 59	294.4	10.8
60 - 64	87.4	3.2
65+	19.5	0.7
Sum 40+	1421.7	51.9

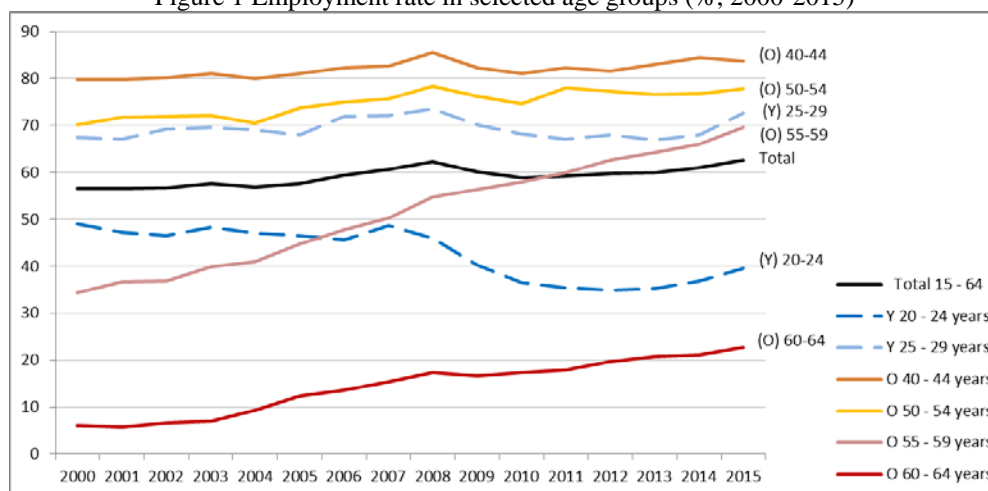
Source: Own calculation from data of the Statistical Office of the SR (database Slovstat).

This observation is important from the point of view of competition at the labour supply side – we can state that persons aged 40 and more who are willing to work comprise more than a half of labour supply in Slovakia and they are evenly distributed by age within the interval 40 – 60 years (considering the quantity, not specific skills or qualification, there is no

competition pressure caused by lack of sources which, in theory, has clear implication for cost of labour/wage rate).

Regarding the employment status of people in different age it is important to point to the fact that employment patterns differ across the age groups, most significantly when comparing the youngest and the oldest age cohorts. As it can be observed in time series for employment rate by various age groups, the development of employment varied from age to age, especially in difficult macroeconomic conditions. Next figure clearly illustrates divergent development of employment rate after past economic crisis (2008) in young (Y) and old (O) age cohorts.

Figure 1 Employment rate in selected age groups (%; 2000-2015)



Note: Y – younger than average/median age; O – older than average/median age.

Source: Based on data of the Statistical Office of the SR (database Slovstat).

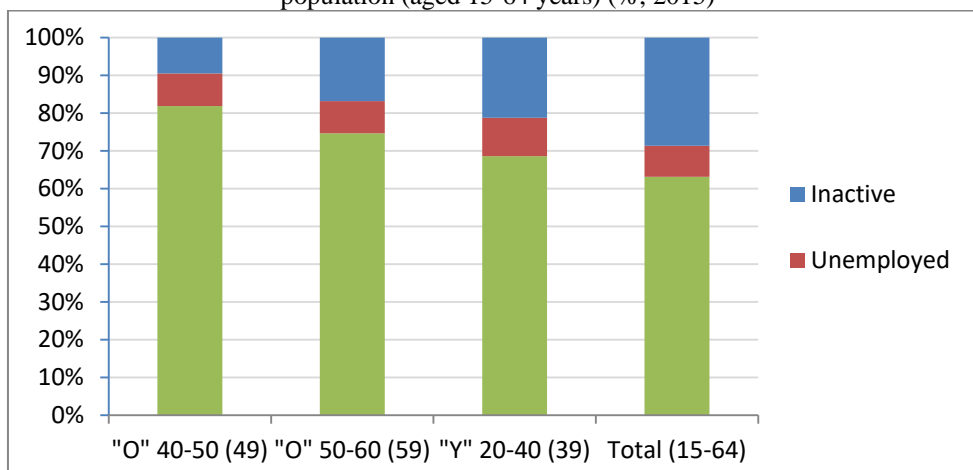
The highest employment rate in a long-run is attributed to the persons in age group 40-44 years, oscillating above 80 % (very similar development pattern can be observed in the next age cohort 45-49, thus we do not show this one in the figure). But not only people in the age 40 to 50 years belong to those with the highest labour force participation – also persons aged 50-54 still exhibit extremely high employment rate, more than 10 percentage points above average (average rate for 15 to 64 years). Looking at the change dynamics over the series, all three mentioned 5-year cohorts (i.e. persons 40 to 54 years old) basically copied the development tendency of total population. Interesting deviation can be noted in development curve of age group 55-59, where employment rate rose to the above average level: at the start of the series the rate in this group was 34 % and surpassed the total employment rate (60 %) in 2011, when total employment finally started to recover after the recession. The employment rate of people aged 55-59 more than doubled over the examined period. Partially it can be outcome of the

societal changes related to the pension reform (former pensionable age for women was 53-57 depending on the number of children). Together with age group 60-64 years, they comprise the group with the steep increase in employment rate (both age groups may have been influenced by the administrative increase in pensionable age; changes were effective gradually since 2004 pension reform).

The lowest employment rates were recorded in the youngest (20-24) and the oldest (60-64) age groups (the only groups with employment rate below total employment rate). However, looking at employment patterns since the start of the 2008 crisis, the employment in both groups developed in opposite direction. Employment rates have fallen especially in the youngest group, but very similar trend was observed when considering all people aged less than 34 years (and also in 35-40 category, although to a smaller extent). Older people fared better during the recession (and in the post-recession period) with respect to the employment dynamics.

We can summarize that in unfavourable economic conditions, particularly the youngest age groups become vulnerable and disadvantaged at the labour market (case of Slovakia). Employment rates in oldest age groups have risen almost constantly since 2000. The drop in total employment during recession in 2009 was notable and lasted until 2015 (when total employment rate recovered to the pre-crisis level), but did not influence the long-run trend of increase in employment rate in older age. Contrary to that, the crisis had profound impact on employment of young people.

Figure 2 Structure of economic activity in selected age groups (O and Y) and in total population (aged 15-64 years) (%; 2015)



Note: O "old groups" – older than average/median age; Y "young group" – younger than average/median age.

Source: Own calculation based on data of the Statistical Office of the SR (database Slovstat).

Besides being more resistant to unfavourable economic conditions (in terms of employment rate changes), older age groups prior retirement also exhibit higher share of employed persons to unemployed and inactive persons, compared to younger groups. In age group 40-50 years, only 9.5 % were inactive, as opposed to 21.2 % in age cohort 20-40 or even 28.6 % in total population aged 15-65 years (see figure 2). Higher portion of inactive population in young group is caused by the people 20-24 years old (where 45 % of population is inactive, including students) and in total population also by the age group 60-64 years (where pensioners represent major part of inactive persons). But also in terms of unemployment, only 8.7 % in age group 40-50 years were unemployed (8.5 % in case of 50-60 years), whereas the share of unemployed in age group 20-40 years reached 10.2 %. Only 18 % of persons aged 40-50 were workless (inactive and unemployed), as opposed to 31 % workless persons aged 20-40, or 37 % workless persons in total population.

Implementation of the seniority principle in income in the Slovak labour market

Analysis of the statistical characteristics presented below confirms existence of the relatively high wage differentiation between individual employees based on their age, also when looking at the various aspects of the national economy structure (by economic activity, type of ownership, or size of the entity).

Wage variability across economic sectors as well as emphasize on the particular age groups is certainly given by the nature of the prevailing type of work in a sector, but is also largely influenced by differences in labour demand in economic activities. The most lucrative sector in terms of income in a long run is information and communication activities sector, where average nominal monthly wage in 2015 rose to 1,751 Euros (in which particularly telecommunication industry drives the wage growth the most, with the average nominal wage reaching 2,019 Euros in 2015). The next most lucrative sector is financial and insurance activities sector (with average wage 1,686 Euros). In the first mentioned, the top highest-earning age group (with the monthly wage at the level of 2,333 Euros) is the one aged 40-44 years (note: the last accessible decomposition by age groups is available for 2014). For the second most payed sector, persons aged 45-49 years belong to the most priced. In both cases, people in middle age and slightly above average/median age are those awarded the most. After 45 and 50 years of age in both sectors respectively, average wage decreases with age notably.

On the opposite side of the scale we can find accommodation and food services activities, where average nominal wage is more than three times lower than in two most payed sectors (533 Euros; to compare, average

wage in Slovakia in 2015 was 883 Euros). In this sector, wage distribution by age is uneven, the wage level fluctuates from age to age group. Special focus should be paid to manufacturing, this part of industry employs 600,000 persons, representing one quarter of total employment in Slovakia. This largest sector has special importance particularly in unfavourable economic cycle phase (it was a driver of employment recovery in 2015 as well). The average wage in manufacturing represents 945 Euros, and the highest wage gains by age are attributed to the persons aged 35-39 years. There are no pay increases with age in manufacturing after reaching average/median age in Slovakia.

Table 5 Wage index by age and economic activity (20-24 years = 100; 2014)

Economic activity sector	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60+
Agriculture, hunting, forestry	100	109	115	121	117	116	122	116	127
Mining and quarrying	100	109	131	121	129	127	118	123	120
Manufacturing	100	120	140	147	139	133	130	129	149
Electricity, gas, steam and air conditioning supply	100	135	174	179	171	158	165	160	154
Water supply, sewerage, waste management and remediation	100	123	140	149	147	142	143	144	147
Construction	100	125	149	148	147	154	151	140	156
Wholesale and retail trade, repair of motor vehicles...	100	132	151	159	156	153	149	145	143
Transport and storage	100	118	137	136	128	127	131	131	139
Hotels and restaurants	100	115	122	124	115	135	113	132	132
Information and communication activities	100	139	197	235	254	220	197	173	152
Financial and insurance activities	100	136	192	232	235	241	218	206	256
Real estate, renting	100	128	167	160	152	144	133	155	150
Professional, scientific and technical activities	100	149	196	202	203	184	160	162	152
Administrative and support service activities	100	124	133	143	155	127	121	117	115
Public administration and defence, compul. social security	100	124	148	158	160	147	137	130	146
Education	100	126	142	151	152	153	153	150	161
Health and social work	100	136	155	147	156	143	139	141	168
Arts, entertainment and recreation	100	117	128	146	137	131	137	136	127
Other activities	100	123	128	119	112	119	125	129	120

Note: Calculated from the average gross monthly wage.

Source: Own calculation based on the Information system on labour cost (ISCP), Trexima.

There are also some sector-specific features considering wage rate of older workers – e.g. in agriculture, hunting and forestry, the biggest wage increases are in place after reaching age of 50 and 60 years. The example of the most constant increase in wage with the age is education sector, where computed index has almost continuous upward trend. This is given by administrative wages guaranteed by the law, where the wage tariffs increases with the years of experience. Positive deviation in some sectors at the highest age group is influenced by the fact, that in age group 60+, large share of

highly specialized experts stays in employment, preferring to keep a job than to retire.

Implementation of the seniority principle in wages varies also when looking at the enterprises/public entities by type of their ownership. Surprisingly, even in public sector entities, the wage is not rising with age constantly; although here the employees of older age are those to enjoy the biggest wage gains if compared to private sector. In this context, the steep growth rate of average wage in foreign private companies cannot be omitted; the wage rises by 85 % before reaching 39 years. In the Slovak private businesses, average wage increases to its top also in age group 35-39 years, but unlike in foreign companies, it stays almost at this level over the next life and increases again at the oldest age.

Table 6 Wage index by age and type of ownership (20-24 years = 100; 2014)

Ownership	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60+
Domestic private	100	129	146	149	146	145	146	150	159
State	100	124	147	152	153	146	141	140	151
Foreign private	100	133	167	185	180	166	155	146	157

Source: Own calculation based on the Information system on labour cost (ISCP), Trexima.

Closer analysis of the earnings by age groups, economic activity and type of ownership indicates that the system of remuneration has changed in a relatively short period of time and negatively affected older people, when particularly foreign companies favour employing youth, or the middle generation of employees, who soon after beginning a career gain experience and enjoy relatively high wages.

Table 7 Wage index by age and size of company (20-24 years = 100; 2014)

Size by no. of employees	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60+
1 - 9	100	130	150	155	174	145	144	164	165
10 - 19	100	136	147	160	150	148	156	158	160
20 - 49	100	128	153	152	150	149	142	137	145
50 - 99	100	129	152	159	154	148	142	138	147
100 - 249	100	131	159	169	159	148	140	135	145
250 - 499	100	134	164	166	159	150	145	138	150
500 - 999	100	136	169	171	159	151	144	142	161
1000+	100	131	159	169	164	153	146	140	151

Source: Own calculation based on the Information system on labour cost (ISCP), Trexima.

In Slovakia, micro-businesses (1 to 9 employees) and small enterprises (10 to 50 employees) are employing 550,000 persons, creating one quarter of total employment in the country. However, wage level in this category of companies is lower when compared to any other company size category. The average wage in companies with less than 19 employees is 709

Euros (2015 data) and in small enterprises with 20 to 50 employees it reaches 829 Euros. The average wage rises with the size of the company; it surpasses 1,100 Euros in enterprises with 1,000 and more employees.

The comparison of average gross wage by age and size of company adds another aspect. First, people with the highest average wage are those aged 35-39 years (in previous survey from 2011, the group with the highest average earnings were 30-35 year-olds, which means that the shift is related to the natural process of ageing). Second, when focusing on the seniority principle, only in small businesses up to 20 employees the wage rises with old age again (after reaching 55 years in micro-businesses and after reaching 50 years in small businesses up to 20 employees). The biggest relative drop in wage related to older age is observed in medium sized companies (100-249 employees), where average wage decreases by one half between its top level achieved in 35-39 age category and reaching 55-59 years.

Conclusion

The results of presented international comparison suggest that, in terms of earnings, the system based on seniority has weakened in the European Union countries (especially in the old member states). In some of them, we can list Germany or Finland, older people approaching retirement age became disadvantaged in the context of relative income/pay. To some extent, it could have been influenced by the unfavourable macroeconomic development in the recent years, since the seniority principle, among others, relies on economic growth associated with the creation of new jobs, including senior's positions.

However, it seems that in Slovakia, with wider packet of experience or skills, in general there are no extreme barriers for older persons to keep their employment in open competition at the labour market. In fact, the employment rate in the latest age groups prior retirement increases in a long-run in Slovakia. Also during/and after the recession, older people fared better with respect to the employment dynamics than the younger cohorts (35-). Considering their employment status, people aged 40-60 years also exhibit lower share of inactive persons as well as unemployed persons when compared to both, young or total population. (However, the picture based on the average values does not reveal the regional or occupational divergences, which are quite high in some cases.)

But as it comes to earnings, seniority principle is hardly applied in any aspect or comparison – preference of young or middle age employees (in terms of work compensation) in some sectors is striking, even in public sectors the state employees aged 45 to 60 years cannot expect to benefit from the life-cycle experience. But this may be influenced also by higher claims by “economy’s post-transition” working generation. Also outcomes of our

examination of earning in manual and non-manual professions proved that Slovakia, together with the Czech Republic, belongs to the group of countries where people aged 30-39 years attain the highest level of earnings. The structural changes, which Slovak economy experienced during its transition, have markedly worsened position of older people in the labour market in terms of relative income.

Empirical data for Slovakia confirmed that seniority rarely brings any wage increases, what may reflect the fact that older generation has attained education and collected working experience under the different economic conditions and is not able to overcome this handicap. But if this is the trend also in more developed European economies (as data suggest), either the middle age generation should not expect its pay to keep rising with age.

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The Role of Intelligence in Female Face Perception: Verbal Not Visual-Spatial IQ Intervenes with Intelligence Assessment in Face Composites

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Abstract

Study concentrates on the relation between intelligence (verbal and visual-spatial) of the observers and their ability to detect the intelligence from the face features of the others. It also studies the connection of intelligence of the observer with their preferences for attractiveness of the female faces, which differ in the levels of visible intelligence. Subjects involved in the study were 415 Slovaks (all of European race; 284 (68,4%) females) with the mean age 21,39 years (st. dev=6,254). Results show, that people who detect the intelligence from the female face composite better, score higher in intelligence than the others. Also, subject who assigned as the prettiest the face which was the most intelligent scored significantly higher in intelligence as those who were attracted more by middle and low intelligent faces. An important finding is, that observed connection applies for verbal intelligence only and not for visual-spatial intelligence.

Keywords: Face perception, attractiveness, verbal intelligence, visual-spatial intelligence

Introduction

Human face recognition and assessment is important capability within the human functioning in social systems. For the survival of the individual it is essential to be able to discriminate whether the face of the other person belongs to the man or woman, whether it expresses friendly or hostile attitudes, whether it looks healthy or stricken, and also, whether it reflects specific features as dominance, femininity, or intelligence... or whether it is “just” attractive for the observer. All these abilities have been formed during the development of our mankind and play critical roles in our life.

Evolutionary biologists explain the meaning and importance of specific features visible in female faces. E.g. attractive face is characteristic with young appearance (Cunningham, 1986; Ebner, 2008), symmetry (Perrett et al., 1999; Zaidel & Hessamian, 2010), presence of sexually dimorphic features (Rhodes, Chan, Zebrowitz, & Simmons, 2003), positive emotions (O'Doherty et al., 2003; Golle, Mast, & Lobmaier, 2014; Sun et al., 2015), average (Langlois, Roggman, & Musselman, 1994) or with healthy skin (Fink, Bunse, Matts, and D'Emiliano 2012) while all these variables are proved to be the common signs of “good genes” (Gangestad, 1993; Scheib, Gangestad, & Thornhill, 1999) and overall health of the beholder.

One of the features that may play an important role in human face assessment is intelligence. It can be studied from two points of view - first of all as a feature present and visible in the human face and carrying (evolutionary) important information and second – the feature that helps the observer to detect the important information from the human face.

Intelligence has been connected with the complex ideal of human beauty long times ago (Etcoff, 1999). The outcomes of current researches show, that attractive people of both sex are considered to be more intelligent than unattractive people (Zebrowitz, Hall, Murphy, & Rhodes, 2002; Kazanawa, 2011). This tendency is not just the simple outcome of generally known “halo effect” (Colman, 2001), but reflect the deep evolutionary principles of mate selection (Miller & Todd, 1998). It is not just that attractive faces are considered to be also intelligent, but the faces which show the signs of intelligence are perceived as more attractive, too (Talamas, Mavor, and Perrett, 2016). Similarly as with physical attractiveness, intelligence is suggested to indicate “good genes” (Miller, 2000; Prokosch, Yeo, & Miller, 2005). From this perspective people should consider the intelligent faces as more attractive than the ones lacking the signs of intelligence. However, the outcomes of researches are not always clear – e.g. Perrett (2010) states, that men are typical with the lack of interest in intelligence and, also, smarter-looking women are considered to be more masculine, which lowers their femininity and therefore also their attractiveness. Besides the connection between intelligence and attractiveness, there is a question, whether we are capable to detect the level of intelligence from the face. Past researches show, that people tend not only to consider the intelligent face as attractive, but that they are also able to judge intelligence from the facial qualities of persons (Zebrowitz, Hall, Murphy, & Rhodes, 2002; Anderson, 1921). Again, the sex of the observer influences the accuracy of intelligence assessment (Murphy, Hall, & Colvin, 2003; Murphy, 2007). Demuthova (2016) shows that intelligent female face is universally (in men and women, too) considered as the prettiest. Also, men and women are similarly accurate when assigning the most intelligent female

face. Differences were found in male face assessment; both – men and women - did not clearly differ between middle and high intelligent male face in attractiveness, nor in the intelligence assessment task.

Studying the connection of the intelligence present in the human face together with the intelligence of the observer is quite rare. Higher intelligence (mainly “social intelligence” – see Sternberg, 2002) enables the person to recognize and respond adequately to social cues and make better social judgments (Taylor, 1990) about the others. Therefore we assume that people with higher intelligence should make more accurate assessments about the intelligence of perceived face. There have been few attempts to evaluate this ability – e.g. Borkenau & Liebler (1995) proved the strong correlation between the measured intelligence of the observer and perceived intelligence from the facial qualities. Kleisner, Chvatalova, and Flegr (2014) found out, that both men and women were able to accurately evaluate the intelligence of men by viewing facial photographs, however, the perceived intelligence correlated with IQ of the observer only in men.

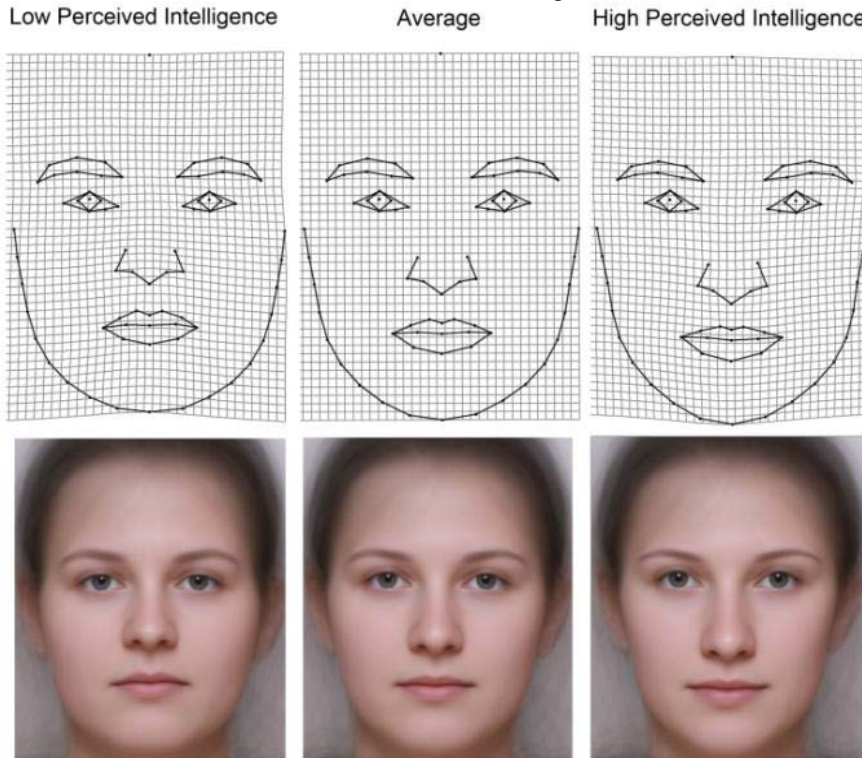
Although a number of studies have examined the perception and assessment of intelligence, they resulted in different outcomes. First of all, it seems it is important to differ whether the male, or female face is being assessed (Perrett, 2010). Also, the sex of the evaluator is the important variable (Murphy, 2007). The concept of “social intelligence” (Sternberg, 2002) points to a possibility, that different results of mentioned researches might be caused not only by the sex of the observer, or by the sex of the perceived and assessed face, but also by the “type” of the intelligence involved in the assessment. Neuroscientists stress the fact that within the face recognition the process of face perception is complicated and very complex and involves various and different brain regions (Haxby & Gobbini, 2011). None of mentioned studies described the specific role of the type of intelligence which may be important for intelligence evaluation. The specific aim of this research is to study the role of the type of the intelligence (verbal and visual-spatial) within the process of attractiveness and intelligence evaluation of the female face composites, which vary in the level of intelligence present in facial cues.

Methods

Female face assessment

For the evaluation of intelligence in female face, the stimuli made by Kleisner, Charvatova, and Flegr (2014) were used (see picture 1).

Picture 1 Female face composites representing three levels of intelligence (Source: Kleisner, Charvatova, and Flegr, 2014)



Three photographs of female faces represented three levels of intelligence. Basically, —faces that garner a higher attribution of intelligence show overall dilations in the area between the eyes and mouth. Further grid deformations cover the distance between the eyebrows, an enlargement at the root of the nose, and a markedly prolonged nose. The area of the chin tends to be constricted. By contrast, faces with a lower attribution of intelligence are characterized by constriction in the area between the mouth and eyes, eyebrows closer to each other, the base of the nose is rather narrowed, the nose is shorter, and the area of the chin is strongly dilated— (Kleisner, Charvatova, and Flegr, 2014).

We used the pictures (not schematic drawings) of three female face composites within the larger test battery. Subjects were asked to choose the prettiest face from these three female faces and after several other tasks (various evaluations of several other faces, questionnaires, etc.) three faces appeared again with the task to choose the most intelligent one. The amount of inserted tasks between these two evaluations avoided possible comparison with previous rating.

Intelligence measurement

For the measurement of verbal and visual-spatial intelligence two subtests of the “Test of the level of mental abilities” (Vonkomer, 1992) has been used. The test has been standardized to Slovak population. The subtest for measuring the verbal abilities consisted of twenty items. The task was to create a word from the group of letters (different for each task) using all of them. The first letter from the word was set and the word had to be a noun in singular and basic form (Slovak language has declinations in nouns). Each task had only one correct solution.

The subtest for measuring the visual-spatial abilities consisted of twenty items, too. Each task consisted of drawing of 3-dimensional prism made of bricks from which some missed. Participant had to state how many bricks missed to fulfil the whole prism and to write down this number.

Subjects

Subjects were 415 participants, from which 284 (68,4%) were female. The mean age of the sample was 21,39 years (st. dev=6,254; with minimum 18 and maximum 67 years of age). Subjects reached the mean score in verbal IQ test=15,3 points which represents 6-7 sten (according to Slovak norms). In visual-spatial IQ the mean score of the sample was 12,09 (sten 5). IQ in the sample was not distributed normally (for verbal IQ the significance in Kolmogorov-Smirnov test=0,000; for visual-spatial IQ the significance in Kolmogorov-Smirnov test=0,000). Nonparametric tests (Kruskal-Wallis) were used for further analysis within the SPSS statistical program, version 17.0. All participants declared their belonging to European race.

Results

First part of evaluation focused on the connection between the intelligence (verbal and visual-spatial) of the observers and their preferences to choose the most attractive face from the female face composites representing three levels of intelligence. From the Table 1 it is obvious, that the majority of subjects (N=313; 75,4%) considered the most attractive the most intelligent female face.

The Kruskal-Wallis test detected the significant differences (asympt. sig=0,000) in the levels of verbal intelligence between those, who assigned as the prettiest face the composite with low, middle, and high level of intelligence. The analysis was made on whole sample as there were no statistically significant differences between males and females in the way how they rated the attractiveness of female face composites.

From the results it is obvious that the higher the level of verbal intelligence of the observer is, the bigger is the probability of assigning the

more intelligent female face composite as the most attractive. However, this rule does not apply for the visual-spatial intelligence of the observer; table 1 shows, that there were no significant differences (asyp. sig.=0,311) in visual-spatial intelligence of the subjects who rated the attractiveness of three female face composites. Moreover, subjects who assigned the middle intelligent face as the most attractive scored in visual-spatial IQ on the highest level. Also, participants who assigned the most intelligent face as the most attractive reached the lowest levels of visual-spatial intelligence. Therefore there is not the clear tendency for the connection between visual-spatial intelligence and attractiveness preference for female faces distinctive in intelligence as it was within verbal intelligence. From these results it seems, that the preference of intelligent female faces and assigning them as the most attractive is connected with the verbal intelligence not with the visual-spatial one.

Table 1 The Kruskal-Wallis test of the differences in verbal and visual-spatial intelligence of the observers according to the choice for the most attractive female face composite

The level of intelligence in perceived female face composite	Choices for the prettiest female face N	The level of verbal intelligence of the evaluator			The level of visual-spatial intelligence of the evaluator		
		Mean rank	Chi-sq.	Asymp. Sig.	Mean rank	Chi-sq.	Asymp. Sig.
Low	16	163,18	16,690	,000	206,34	2,336	,311
Middle	86	187,16			225,44		
High	313	221,38			203,29		
Total	415						

The second question is, whether the ability to detect intelligence from the female face composites is connected with the type of the intelligence of the observer. Table 2 shows the results of Kruskal-Wallis test of the differences in verbal and visual-spatial intelligence of the observers according to the choice for the most intelligent female face composite. Again, there were no statistically significant differences between males and females in the way how they rated the intelligence of female face composites.

Table 2 The Kruskal-Wallis test of the differences in verbal and visual-spatial intelligence of the observers according to the choice for the most intelligent female face composites

The level of intelligence present in perceived female face composite	Choices for the most intelligent female face N	The level of verbal intelligence of the evaluator			The level of visual-spatial intelligence of the evaluator		
		Mean rank	Chi-sq.	Asymp. Sig.	Mean rank	Chi-sq.	Asymp. Sig.
Low	51	148,79	25,343	,000	225,57	1,340	,512
Middle	131	188,85			207,82		
High	233	231,78			204,26		

In this case participants were asked not to assign the most attractive face but to state, which face is the most intelligent by their opinion. The

results were very similar to the outcomes of the previous task (see table 2) – there were significant (asympt. sig.=0,000) differences in the levels of intelligence of the observers who detected the intelligence of the female face correctly (N=233) and those who assigned as the most intelligent the least (N=51) or middle (N=131) intelligent faces. The more accurate the evaluation was the higher level of the intelligence the assessor gained. However, this applies for the verbal intelligence only; there were no significant differences (asympt. sig.=0,512) spotted in visual-spatial intelligence.

From the results it is obvious, that the intelligent female face (composite) was generally considered as pretty, and that people in majority did not have a problem to detect right the intelligence from the female face. When the differences in intelligence of the observer/evaluator were studied, it seems that intelligence of the observer intervenes with the way how the person rates the female face. The more intelligent the observer was, the better (more accurate) his/her estimate of intelligence of the female face composite was. Also, the most intelligent faces were also the prettiest for the participant with the highest intelligence scores. An important finding is, that these relations apply only for the verbal, but not visual-spatial intelligence of the evaluator.

Discussion

The interesting finding was that the better the estimation of intelligence of the female face is, the higher intelligence gained the observers in the IQ tests. The possible explanation lies in the core of the definition of intelligence. As it is (besides many other capabilities) also the ability to make the right social judgments (Taylor, 1990), its presence and higher levels could favour in face assessment those who score higher. Intelligence therefore enables to make proper estimations and also to assess more correctly the presence of intelligence in human faces. Within this explanation another component may play role. Recent studies brought new knowledge connecting the assessment of intelligence and attractiveness. E.g. Talamas, Mavor, and Perrett (2016) showed that participants who scored better (higher) on intelligence tasks were more likely to endorse the perceived attractiveness-intelligence correlation. Within these means, it is possible, that more intelligent evaluators did not really differ between the attractiveness task (to point to the most attractive female face) and assessment task (to point to the most intelligent task), because they see them as strongly connected.

It is also possible, that some evaluators did not really assess the intelligence within the intelligence task, but for another reason. They could be – unconsciously – influenced more by the overall attractiveness of the intelligent face. This can also happen easily in cases of evaluators for which

the task about assessing the level of intelligence of the face is not clear enough (e.g. they do not have clear criteria of the assessment of intelligence from the face). In such cases e.g. Kahneman (2011) stresses, that people often simplify the difficult tasks and replace them – unconsciously – by easier ones. Therefore, it would be beneficial to study whether people really assigned the same faces as pretty and as intelligent, too. However, from the results presented, it is obvious, that this possibility cannot explain all cases – the numbers of choices in the attractiveness task and in the assessment task do differ. However, it can play still some role in some cases.

The similar mechanism can also explain the fact why more intelligent observers assigned the most intelligent face as the prettiest as well as why they were more successful in the right intelligence estimation as those who were less intelligent. We may assume that people, who are more intelligent, meet the intelligent people more often and operate in environment with the presence of more intelligent people, too. All these people then possess the faces in which the “intelligence” features are present. This creates an environment in which the face with intelligent features is very frequent (including the face of the assessor). As Kant (2005) states, our “ideal” prototype of attractive human face is influenced by the “types” of faces we meet during our life. The result is that it is possible that for more intelligent people the intelligent face becomes a reference (or a prototype) for evaluation of other faces. It also creates the specific sensitivity towards face-specific (in this case intelligence) features. Already Zhuang, Zhang, Xu, and Hu (2014) found out that males who evaluated faces were extremely good in differentiation of self-similar facial cues. This may point to a possibility, that when subjects evaluate the intelligence in faces, they assess as more intelligent and s more attractive the face which is (in its features) more similar to their own face features and they also make more precise distinction between the various levels of intelligence features present in observed faces.

However, all these arguments discuss only the relationship between the level of intelligence and the assessment of human face, not the interesting finding, that the connection between and the assessment was present in case of verbal intelligence, but not in the case of visual-spatial intelligence. Neuroscientists within the face recognition stress the fact that the process of face perception is complicated and very complex. Face recognition of familiar faces and face identification differ from the process of face perception focused on extracting the meaning of facial expressions as well as from the process of eyes gaze perception (Haxby and Gobbini, 2011). Functional neuroimaging has revealed a core set of brain areas that are activated during face perception, including fusiform face area – FFA (McCarthy, Puce, Gore, & Allison, 1997), the occipital face area – OFA (Gauthier et al., 2000), and posterior superior temporal sulcus – fSTS (Puce

et al., 1998) all located in occipitotemporal cortex (Haxby, Hoffman, and Gobbini, 2000) showing the right hemisphere dominance (Kanwisher and Barton, 2011). Except them, also many other brain regions are involved within the extended system as e. g. amygdala (emotions), medial prefrontal cortex (personal traits) or inferior parietal and frontal operculum (facial expression) (Haxby and Gobbini, 2011). These information become very interesting from the point of view of researches which, on the other hand, concentrate on differences between brain regions involved when using verbal and non-verbal (e.g. visual-spatial) intelligence (Wallace et al., 2010). Further research concentrated on neuroimaging may bring more information on possible connections between the activities within the brain functioning in verbal tasks and human face assessment.

Our research brought new questions and inspirations for the further research. As it was already written, the examination of the ways how people evaluate faces when assessing them in attractiveness and when estimating the intelligence would be interesting together with analysis of similarities and differences of these two processes. Certainly, the evaluation of male face composites would be enriching, too. Also, it seems that verbal intelligence helps to assess the human faces in intelligence assessment. It is questionable, whether it influences also some other assessment – e.g. presence of some personality features in the human face, and whether these are again connected with verbal, or some other “type” of intelligence. Finally, our study rises stimuli for brain research concentrating on areas involved in different tasks concerning the face recognition and areas active within different “types” of intelligence tasks.

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Insights into Differences in Response of the USA and the EURO Area to the Recent Crisis

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Abstract

The recent financial crisis followed by recession has strongly hit the economies of the USA and euro area. However, their fiscal policy tools available differ significantly, hence also the response of fiscal authorities of both monetary unions to the crisis. On the other hand, in the field of monetary policy, rather similar tools have been used, although with different timing and results so far. The aim of the paper is to underline the main differences and common features of the institutional response to the crisis in the USA and euro area, to compare the developments of selected macroeconomic indicators in the period 2007 – 2015 and formulate conclusions for both monetary unions. The first part of the paper deals with the response of the US Federal Reserve System (Fed) and the European Central Bank (ECB) to the recent crisis. In the second part, the focus is on different possibilities of fiscal policy response in both monetary unions – the USA as a fiscal union and the euro area as a monetary union without a fiscal union. In the third part, developments of selected macroeconomic indicators since the start of the crisis are analysed, namely economic growth, unemployment rate and general government gross debt. The key outcomes are summarized in conclusion.

Keywords: Euro area, USA, economic crisis, monetary policy, fiscal policy

Introduction

The reaction of responsible institutions to the recent financial crisis is unparalleled in US post-war history and sixteen years of the euro area's existence, both in terms of the need to act against all of its diverse forms (mortgage, credit, banking, debt crisis, crisis of demand, etc.) as well as in terms of the scope and the intensity of adopted monetary and fiscal measures.

When looking for reasons of different macroeconomic developments in the USA and euro area since the start of the crisis, a number of structural

differences need to be taken into account. They include the existence of a functional fiscal union in the USA in contrast to the euro area, level of labour market flexibility as well as the status of the USD as the main reserve currency. In this paper, the focus will be particularly on parameters of policies conducted by central banks (Fed, ECB) and responsible fiscal authorities. The aim of the paper is to underline the main differences and common features of the institutional response to the crisis in the USA and euro area, to compare the developments of selected macroeconomic indicators in the period 2007 – 2015 and formulate conclusions for both monetary unions.

Response of monetary authorities

In the light of the debt crisis and the need for fiscal consolidation in advanced economies, monetary policy has become the main instrument for the support of aggregate demand and the re-start of business cycle expansion. Cukierman (2016) introduced several reasons for the differences in monetary policy instruments used in both monetary unions and their various effects. The first is a relatively greater caution and conservatism of the ECB compared with the Fed, as evidenced by the different intensity of quantitative easing (QE) policy implemented by these two institutions. In the period 2008-2012 the balance sheets of the two central banks have developed similarly. However, since the second half of 2012 further monetary expansion has been carried on only by the Fed, while the assets of the ECB have begun declining sharply. Reversal occurred only after launching the QE programme in 2015.¹⁴

The second difference is that the share of banks on total lending is greater in the euro area than in the USA, due to more developed capital markets in the USA compared with continental Europe. This is also why the structure of monetary operations varied between the ECB and Fed. While the former provided necessary liquidity to banks through REPO transactions, the operations of the latter were primarily carried through direct purchases of securities. Monetary base and money supply in the euro area were more sensitive to short-term fluctuations in demand for liquidity by banks, while in

¹⁴ The ECB launched the QE programme in March 2015, with asset purchase plan of 60 billion euros a month, at least until September 2016 and in any case until the ECB sees a sustained adjustment in the path of inflation that is consistent with its aim of achieving inflation rates below, but close to, 2% over the medium term. In December 2015, the ECB extended the asset purchase programme until the end of March 2017 and in March 2016 the monthly amount of purchases was increased to 80 billion euros, which means more than 1700 billion euros for the whole period. For comparison, during implementation of the QE programme in the USA (November 2008 – November 2014), the Fed pumped into the economy more money than the ECB. Total assets of all Federal Reserve Banks increased from 2074 billion to 4486 billion USD during this period.

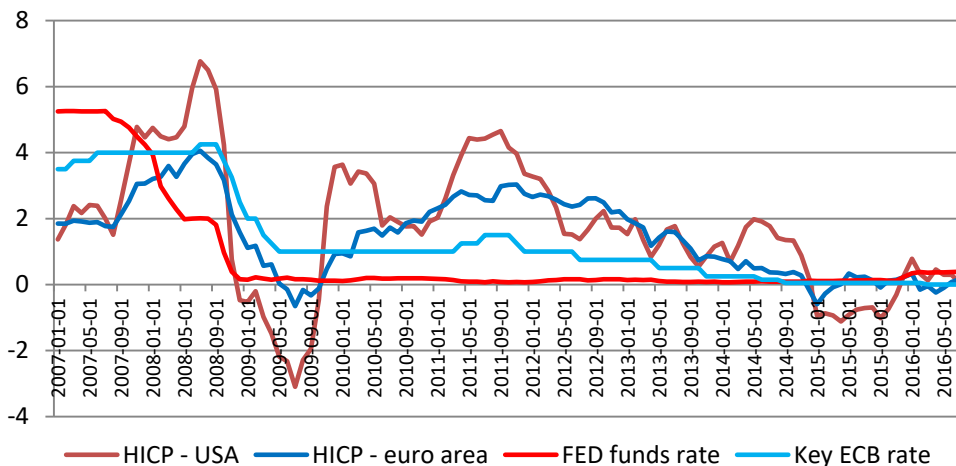
the USA monetary base was essentially influenced by decisions and policies conducted by the central bank. Hence, Fed's policy could be more efficient in terms of achieving defined objectives (full employment, price stability), which was also reflected in higher growth of asset prices.

At the first glance, it is obvious that the USA have achieved better results in parameters of GDP growth, inflation and unemployment, but as more detailed analysis shows, the results of implemented macroeconomic policies are not so straightforward. In the euro area, the current development does not suggest that extremely expansionary monetary policy (with a minimum space for further loosening available) could be successful without increased efforts of the Member States governments. The character of the ECB's monetary policy intensifies risks for future developments, whether it is risk of creating price bubbles or dependence on the QE policy, timing of finishing the programme and its consequences.

An interesting phenomenon of the recent crisis is the fact that virtually all advanced economies were negatively affected by increased deflationary pressures. The trend of decreasing inflation could be seen in the USA already since the eighties of the last century. However, since 2012 the US inflation is below its historical average (Figure 1), despite unprecedented monetary expansion. In 2015 even deflation was recorded, which occurred only shortly after the recession in 2009. This could indicate that the Fed's policy may not be so effective and the US economy could be closer to the recession than it might seem. The euro area was also confronted with the problem of deflation in 2009, although to a lesser extent than the USA, and the ECB is fighting this negative phenomenon again since the end of 2014.

Figure 1

US Fed funds rates and ECB's key interest rates, inflation rates in the USA and euro area (%)



Source: ECB (2016), Eurostat (2016), FRED (2016).

Already for a long time, deflation is a relevant problem in the Japanese economy. Although in the USA and euro area deflation is present for a relatively short period, it can pose a serious risk. The US and euro area authorities are well aware of this and therefore they have implemented unprecedented monetary expansion, leaving interest rates at historically low levels near zero or even at the zero level (USA for the eight consecutive year, euro area for the last three years) (Figure 1).

Response of fiscal authorities

Regardless of the economic development, expenditures of the US federal budget amounted around 19% of GDP for most of the 1985-2007 period. However, the scope and intensity of the Great Recession required unprecedented government intervention (banks bailouts, social transfers), increasing the share of federal budget expenditures up to 24.4 % of GDP in 2009 (White House, 2016).

An important parameter of the debt crisis, which highlights the nature of fiscal union in the USA, is the increase in transfer payments from the federal level down to the national and local governments. At the state and local governments' level, requirement for balanced budgets (in the light of falling tax revenues and rising expenditures) was compensated by an increase in transfer aid from the federal level. In term of the debt crisis' negative impact on the budgets of the euro area Member States, there are obvious positive effects from the existence of fiscal union in the USA. In contrast to the euro area, the USA could afford record growth of spending at the federal level, enabling effective compensation for the negative impact the debt crisis had on the aggregate demand.

Integral part of this process was postponement of enforcement or direct increases of limits for the amount of federal debt. Such action has taken place eleven times since 2007. Historically nothing exceptional, since after the end of World War II this happened more than ninety times. In the USA, the process of determining the debt limit is separated from the creation of the federal budget and therefore the limit does not restrict the government's ability to operate with budget deficits or under new commitments (White House, 2016). Increased deficits and higher debt limits are natural consequence of weaker economic activity and the loss of tax revenues as well as of the growth of expenditures due to financial crisis' negative consequences.

Expansionary fiscal policy at the federal level has played an important role when offsetting the effects that crisis and subsequent recession imposed on the budgets of individual states and local governments. Federal government response to the crisis has been relatively straightforward, compensating at least partially for the loss in the private

demand (2009-2013) which occurred during the deleveraging of households and businesses. Hence, the growth of public debt created counterweight to a record-high private debt and the process of deleveraging.

On the other hand, restrictive fiscal policies implemented in the euro area, in particular from 2011 to 2013, had rather negative impact on economic growth and labour market developments. Fiscal austerity worsened recession mostly in Greece and other periphery countries, hence, debt-to-GDP ratios increased faster.

In contrast to the USA, the euro area is not a fiscal union, which represents a disadvantage from the view of both economic theory and economic reality. The recent crisis, with its consequences for the euro area, has revealed the necessity to face this shortage. Mechanisms of solidarity in the euro area are not at the level of the American federal fiscal system at all. The US system contributes to stabilization of regions hit by asymmetric shocks. The centralised budget of the whole European Union is low – approximately 1 % of GDP (versus almost 20 % GDP in the USA), which means about 2 % of public expenditure in the EU Member States (versus more than 50 % of total public expenditure in the USA) – and in case of asymmetric shocks in individual countries, it does not work as an automatic stabilizer. Although the euro area (more precisely the whole EU) has a kind of solidarity mechanism available - the Structural Funds and the Cohesion Fund (aimed to promote economic convergence and reduce disparities among the Member States), these cannot be considered as sufficient compensation, due to their lower volume and medium- or long-term effects, which means that they do not work anticyclically (Iša, 2002).

According to D'Apice (2016), yearly cross-border flows within the USA amounted to 1.5 % of GDP between 1980 and 2005 on average, compared to 0.25 % in the EU for 2007 to 2013. For each euro paid by an average net contributor (EU Member State), approximately 75 cents return through the EU budget, and 25 cents cross a border. Although the US federal budget is less redistributive in normal times (around 90 cents per dollar returning to the contributing state), in the wake of the global crisis net cross-border fiscal flows increased strongly, financed by federal borrowing. Moreover, the main net beneficiaries of the EU cohesion policy funds are not yet members of the euro area, which implies that cross-border flows within the euro area are even closer to zero.

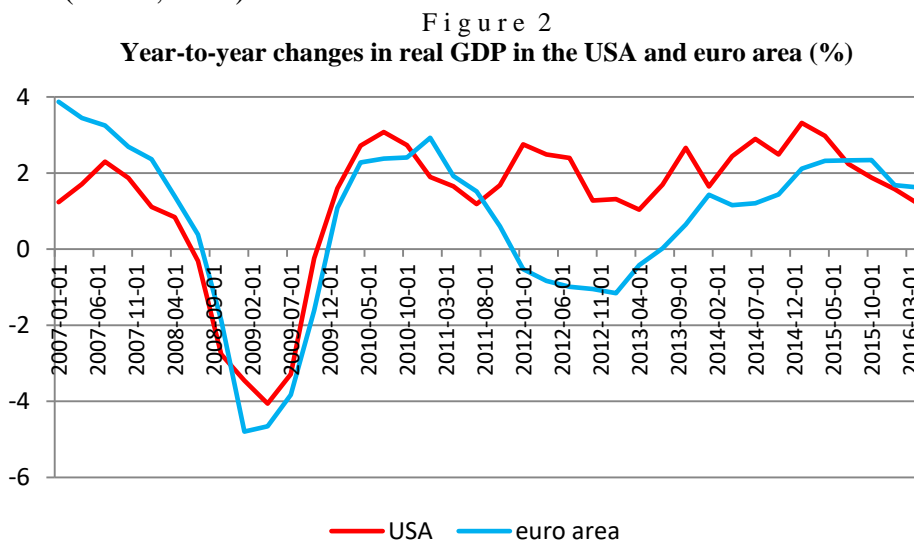
The euro area tries to solve the absence of fiscal union. According to the so-called *Five Presidents' Report*¹⁵ *Completing Europe's Economic and Monetary Union* (Juncker, Tusk, Dijsselbloem, Draghi and Schultz, 2015), a

¹⁵ President of the European Commission in cooperation with the President of the European Council, President of the Eurogroup (eurozone Finance Ministers), President of the ECB and the President of the European Parliament.

stabilizing function of the euro area should be formed to improve the cushioning of asymmetric shocks in future. The European unemployment benefit scheme is among the most considered solutions. It could take many forms; the main types are reinsurance and genuine schemes (for more detail, see Gros, 2016).

Development of selected macroeconomic indicators

At the beginning of 2009, the US economy has experienced significant decline in real GDP growth exceeding 4 % at the annual level (Figure 2). Responsible authorities were obliged to respond and revive the expansion of economic cycle as soon as possible. The US economy was able to start the expansion relatively quickly, especially when compared with other advanced economies. The quarterly growth rates of real GDP in the USA averaged 2 % since the end of the recession until the first quarter of 2016 (FRED, 2016).



Source: FRED (2016).

In this regard it can be concluded that measures taken by responsible US authorities were effective. But after looking at the evolution of GDP in more detail manner, some doubts about the policy achievements have to be expressed. It is, for example, very unusual to experience quarter-to-quarter fall in real GDP during the expansion of business cycle (in first quarters of 2011 and 2015). That certainly does not suggest sufficiently robust expansion when compared with episodes of business cycles in the past.¹⁶

¹⁶ Last time something like this happened during the fifties of the last century.

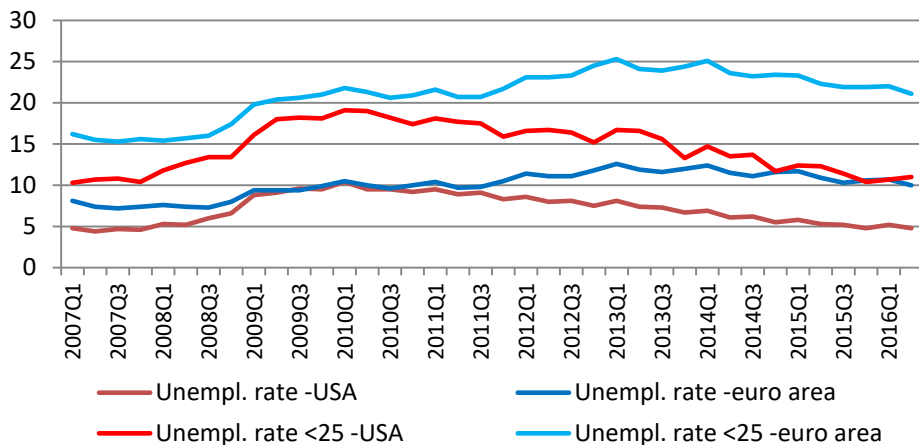
The euro area experienced similarly deep recession in 2009 as the USA; however, the economy of the European monetary union did not recover as quickly as the US economy. In 2012, after two years of economic growth, the euro area lost dynamics and recorded the second recession in this millennium, although a more modest one compared with the one in 2009. The reasons behind such development include weak investments and private consumption, due to increased uncertainty, continued fiscal consolidation, weaker foreign demand as well as growing unemployment. These two recessions can be considered as one crisis period with two bottoms – the first caused by the global financial crisis and the second (less deep) one as a result of the European debt crisis.

One reason for such a slow recovery might be pro-cyclical fiscal tightening. That is why the effectiveness of the EU's fiscal framework¹⁷ has been questioned recently, whether it is in achieving fiscal stabilization or public debt sustainability. In addition, the existing EU's fiscal rules have not been properly applied so far.

USA seems to be more successful also in terms of labour market developments. The unemployment rate reached more than 10 % in October 2009, the second highest level since the end of the World War II. Due to the higher economic growth as well as more flexible labour market, when compared with the euro area, the US economy was able to get unemployment back to the levels close to its natural level relatively quickly (below 5% in 2016) (Figure 3).

Figure 3

Unemployment rate and youth unemployment rate in the USA and euro area (%)



Source: Eurostat (2016).

¹⁷ The Stability and Growth Pact, the Fiscal Compact, the so called Six-Pack and Two-Pack.

On the contrary, unemployment rate in the euro area continued to grow after exceeding 10 % in the end of 2010, reaching even 12.6 % at the beginning of 2013. Currently, unemployment rate is again at the level of about 10 %, with one half representing long-term unemployment. However, the differences among the individual Member States are rather big – on the one hand, Germany and the Czech Republic recorded in the second quarter of 2016 the lowest unemployment rate (about 4 %), and Greece, on the other hand, the highest one (23 %).

Similar trends can be seen in the developments of unemployment rates in the active population under 25 years. While since 2010 this indicator has fallen from more than 19 % to the current level of about 11 % in the USA, the euro area recorded maximum of 25 % at the beginning of 2013, followed by stagnation or decrease to currently recorded 21 % unemployed in the active population of young people (Figure 3).

At first sight, labour market development and job creation may indicate effectiveness of the Fed's actions. However, on closer look it turns out that the current revitalization of labour market was the longest one, only comparable with the recovery right after the World War II. It suggests that the US economy is no longer able to generate new jobs in such a fast pace as before. Besides, most of the newly created jobs are low-paid positions in the service sector. This fact combined with rising number of part-time work contracts diminished opportunities for higher earnings, hence leading to higher working poverty and income polarization.

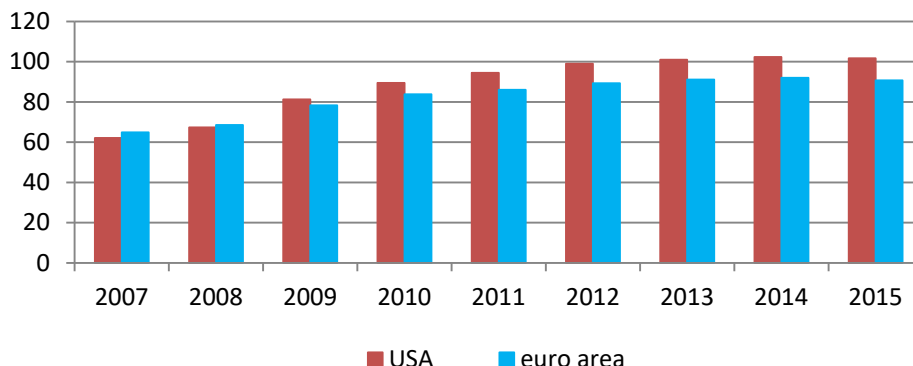
The euro area registers double unemployment rate (total as well as in the young population) compared with the USA, although also in Europe the use of part-time jobs increased. Given the growing share of part-time employed, the overall amount of hours worked did not still exceed the level reached in 2008 in the euro area. Structural unemployment remains one of the key problems in the European labour market, in particular within the group of low-skilled people.

Both monetary unions the euro area and the USA face risks related to indebtedness of the public as well as private sector. Given rather significant differences in the field of fiscal policy, attention is further paid to government debts.

Prior to the recent crisis, the growth of the public debt did not pose any significant threat to the US economy and was kept under control. In 2007 it amounted to about the same level as ten years before. Its rapid growth to record levels, even from historical perspective, begun with the financial crisis and subsequent recession after 2008. Public debt has risen from 62 % of GDP in 2007 to more than 100 % of GDP in 2015 (FRED, 2016) (Figure 4). It is a result of weaker economic activity and the loss of tax

revenues as well as the growth of expenditures to overcome negative effects of the financial crisis.

Figure 4
Government debt in the USA and euro area (% of GDP)



Source: Eurostat (2016), FRED (2016).

Government debt of the euro area as a percentage of GDP has also increased since 2007 and already in 2009 it exceeded the 1999 level (71 % of GDP). In 2015 it slightly decreased for the first time since the beginning of the recent crisis, namely to 90.7 % of GDP. This decrease has been possible due to a slightly faster economic growth and extremely low interest rates. However, it needs to be underlined that in absolute terms the volume of debt further increased in 2015. Out of nineteen euro area Member States, five registered the government debt above 100 % of GDP (Greece, Italy, Portugal, Cyprus, and Belgium) and further nine countries above 60 % of GDP defined in the Stability and Growth Pact.

Conclusion

Recent macroeconomic performance of the two monetary unions resulted also from different reaction of responsible institutions to the financial crisis and the Great Recession, whether it was in the field of fiscal or monetary policy. In spite of these differences, the USA and the euro area face a number of similar risks including deflation, timing of the QE programme or the rise of public debt.

Programme of QE realized by the Fed has lasted for six years to bring results in terms of macroeconomic indicators. Therefore, it is reasonable to expect that a similar programme in the euro area realized by the ECB should have comparable length and intensity to be effective. In terms of fiscal policy, the US fiscal union provided needed spending at the federal level which enabled financial compensation for negative effects the debt crisis imposed on budgets of individual states, nevertheless leading to increase of the public debt at the federal level. On the other hand, it would be essential

for the euro area to establish a new efficient institutional framework for stabilisation of asymmetric shocks in order to eliminate shortages resulting from the absence of a fiscal union.

When comparing economic developments in the USA and in the euro area after the Great Recession in terms of macroeconomic indicators as GDP growth, the rate of unemployment or inflation, it can be concluded that the USA outperformed the euro area in general. However, a closer look at structural indicators reveals weaker economic expansion as well as lower ability of the US economy to create new jobs with similar pace as during the previous expansions. On the other hand, there are still only weak signs of recovery in the euro area manifested in economic performance and in the labour market development. Since the beginning of the crisis the government debt to GDP ratio has increased to historically record levels in both monetary unions. In the absence of fiscal consolidation and in the light of future budget expenditure challenges (e.g. population ageing), sustainability of public finances could be endangered.

Note

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Neuromyths in Education and Development: A Comprehensive Approach

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Abstract

A lot of people imagine neuroscience, and its neuroimaging techniques, as the holly grail of information as far as the capacities of the brain and its developmental path is concerned. Therefore, not long ago, there was a rage for “brain-based learning”. It purported to use neuroscience to design activities that were more amenable to the brain’s structure and behavior, or that helped to integrate the work of the two hemispheres. For several decades thereafter, myths about the brain — neuromyths — have persisted in all cognitive, social and environmental levels, often being used to justify ineffective approaches to teaching, learning and reacting to various stimuli found in our everyday life. Many of these myths are biased distortions of scientific fact. Cultural conditions, such as differences in terminology and language, as well as general miscommunication have all contributed to a ‘gap’ of knowledge that has largely shielded these distortions from scrutiny, while further ‘harm’ typical and atypical development in both the educational and the professional contexts. The aim of the specific paper is to present the nature and substance of neuromyths, after explaining five major of them and providing a way to act against their creation or to avoid them when met.

Keywords: Education, Neuroscience, Neuromyths

What are the neuromyths?

A lot of people imagine neuroscience, and its neuroimaging techniques, as the holly grail of information as far as the capacities of the brain and its developmental path is concerned. They turn to this fairly new but indeed very complex domain of science to prove or disprove theories, to develop or improve teaching, learning or rehabilitation methods, to solve problems that in some ways cannot be solved otherwise. Nevertheless, even if knowing the complexity of the domain’s substance and methods, people don’t usually take time to critically address what they read or ‘served’, while most of all, they don’t really try to understand how this very specialised, yet

very practical domain of research and practice works.

Because of this, a lot of oversimplification occurs in terms of the brain function and structure, and this is where and why the term neuromyth appears. These myths about the brain have persisted in all cognitive, social and environmental levels, often being used to justify ineffective approaches to teaching, learning and reacting to various stimuli found in our everyday life. Many of these myths are biased distortions of scientific fact. Cultural conditions, such as differences in terminology and language, as well as general miscommunication have all contributed to a 'gap' of knowledge that has largely shielded these distortions from scrutiny, while further 'harm' typical and atypical development in both the educational and the professional contexts.

Where do the neuromyths come from?

Neuromyths usually are not created having in mind either malpractice or distortion of scientific evidence. Even if there are examples where private companies use non-precise information and facts in order to persuade their customers to buy their brain related product, neuromyths are usually developed after a 'genuine scientific confusion'. For example, the misunderstood fact that children become hyperactive when over-consuming sugar, has been wrongly fed through some very old and falsely structured research projects. These research projects were unfortunately not detailed in their conceptualisation and implementation. On the contrary, nowadays we find an emerging number of scientific facts and well designed scientific protocols showcasing no connection between sugar consumption and children's hyper activity (Legg, 2014; Kim & Chang, 2011).

Generally, it seems that neuromyths may also appear due to immaturely published scientific evidence, which at a primary data collection and analysis level present a possible connection of facts. Unfortunately, at any initial stage of research, many facts can be left unverified due to time or funding constrains, whereas the need for an extended period of retesting validity may prevent researchers from communicating the correct outcome in time, avoiding the aforementioned. This whole approach is falsely reproduced even more by non-specialists, rendering in the end impossible any rightful and valuable usage of the initial outcome due to the extended damage the first communiqué has achieved in society.

However, some neuromyths may be created through personal or social biases, or even through a wrong approach of research data translation. Neuroscience is one of the most complex and detailed scientific fields, hence open usually to misconceptions and false assumptions. People while trying to discuss neuroscience in simple terms, they tend to oversimplify the brain related mechanisms of function and structure, harming in the end both

neuroscientific practice and fundamental knowledge of life. We can present here as an example the ‘first 3 years of development and learning’ neuromyth. This neuromyth suggests that someone, unless he or she is exposed to a specific stimulus or skill learning process of a particular field in the very first three years of life, they will never manage to reach the outmost of performance in the particular field. In reality however, things don’t exactly work like this. While the first three years of life are indeed important for development and learning, it has been repeatedly proven through many neuroplasticity related research projects that the human brain is equally capable towards functional adaption throughout the whole lifespan and not just in the very first three years of life.

The most famous Neuromyths

One of the most basic neuromyths existing out there is this one of the 10% performing capacity of the brain versus the 90% one. The idea that we only use 10% of our brains is probably one of the most famous and convenient ones adjunct to the brain science, as it has been proved to be almost comforting to believe that we do have some spare capacity of performance to use when needed. We think that this 90% of the brain can help us excel in difficult situations, or that this is the part lying there inactive and waiting somehow to wake and drastically improve us. This factoid has been widely used to sell products to enhance brain performance, while it has been put forth as the responsible part of the brain which produces and explains mystical and paranormal human powers.

Even if deeply believed from most of the people, none of the above is based on evidence whatsoever, while there are four good reasons proving all the above almost certainly false (Beyerstein, 1999):

- 1) If we only use just the 10% of our brains then damage to some parts of our brains should have no effect on us.
- 2) From an evolutionary perspective it is highly unlikely we developed a resource-guzzling organ, of which we only use 10%.
- 3) Brain imaging shows that even while asleep there aren’t any areas in the brain that completely switch off.
- 4) Parts of the body that aren’t used soon shrivel and die. Same goes for the brain. Any neurons we weren’t using should soon shrivel and die.

A second famous neuromyth that should be surely debunked along with the first one, is the right-left lateralisation of brain activity and consequently behaviour. There is this common assumption in the world suggesting that right-brained people are more creative, while the left-brained are more practical, analytical and logical in their life. The idea behind this assumption lies again in brain activity, claiming that one hemisphere could be more active - or inactive accordingly - than the other. Fortunately, this

neuromyth has been disproved many times the last few years, finding evidence in many research studies utilising the knowledge after analysing many research subjects. For example, Dr. Nielsen and his colleagues (2013) collected data with the help of the Magnetic Resonance Imaging (MRI) technique of over 1000 people and then explained that “..we just don’t see patterns where the whole left-brain network is more connected or the whole right-brain network is more connected in some people”. The same results come from the music domain research - a very creative activity according to most people - suggesting that “(a) not only one brain part is active during creative musical tasks, meaning there is not just one part of the brain connected to [...] creativity and (b) that both hemispheres show activation when music is present either as an acoustic stimulus, as performance or as pure creation (Papatzikis, 2014).

In 2015, the Organisation for Economic Co-operation and Development (OECD) has pronounced the following six neuromyths as the most wide-spread in the academic and corporate community (OECD, 2015):

1. The ‘first three years’ neuromyth. This neuromyth suggests that our brain “is only plastic for certain kinds of information during specific ‘critical periods’. Thereby, the first three years of a child are decisive for later development and success”. On the contrary, what actually is nowadays seen as valid refers to the optimal periods of development, showcasing that while there are indeed some periods where neuronal connections can be created easier in the brain, neuroplasticity refers to the whole life-span involving all types of information and analyses of them.
2. The ‘early enriched environments’ neuromyth. This neuromyth suggests that only “enriched environments enhance the brain’s capacity for learning”, therefore children need to be exposed to rich and diverse stimuli to develop, especially in the first three years of life. While this path of brain development has been followed and verified as true for rodents, it has not yet verified fully for humans. On the contrary, research has shown that even if someone is not exposed to an enriched environment of stimuli in the first three years of life, they can still achieve a high level of performance later on. This is due to the human brain’s capacity to develop synaptic contacts and neuronal circuits even beyond the first three years of life, without ‘asking’ for a specific enriched approach in the very beginning of development.
3. The ‘types of learning’ neuromyth. This neuromyth suggests that “there is either a visual, auditive or a haptic type of learning for human beings”. Accordingly, we learn the alphabet better for example either by seeing it on the board, by listening the letters from a teacher, or by touching some letter shaped toys instead. While it has been repeatedly stated that

learning occurs through all these different channels of perception, it has been falsely implied also that only one of the above can improve an individual's learning efficacy. Fortunately this is not true, as learning occurs through the intellectual process that summarises all the above rather by involving just one of the three types of perception mentioned here. Human beings need indeed to first perceive information to initiate the process of learning. Nevertheless, they need to understand it later on in order to acquire knowledge, consolidate it and finally achieve learning. The latter is a step in the process that is more important than any perceptual level and goes beyond the senses themselves (Pashler, McDaniel, Rohrer & Bjork, 2008).

4. The '10% neuromyth'. This neuromyth, as already mentioned, suggests that we use just a 10% of our brain and that only a few of us are capable of using some more of it through out our lives. It has been thoroughly explained above that fortunately this approach is not at all true.
5. The 'hemispheric specialisation' neuromyth which has been also explained in detailed above. Of course, the aforementioned do not mean that some persons are not more creative or more analytical and logical than others. The evidence just suggest that it is wrong to say that creative people are more 'right-brained' or that logical people are more 'left-brained'.
6. The 'multilingualism' neuromyth. This one includes three sub-neuromyths suggesting that "(a) two languages compete for brain resources, (b) knowledge acquired in one language is not accessible in the other language, and (c) the first language must be spoken well, before the second language is learnt." All three parts of the neuromyth can be disproved by mostly simple and everyday examples. For instance, regarding the first part, we all know that there are a lot of people who can speak fluently more than 10 or even 15 languages. Therefore, there is no point to argue for 'lost space' in the brain due to multilingualism. As far as the second part is concerned, it is well known that someone who knows how to calculate in one language, can do so in the second acquired language. Skills that are learned in on language are not lost due to the change of language code, therefore there is no compartmentalisation of knowledge in different languages. Finally, regarding the third part of this myth, research has shown that the more someone learns languages, the better their understanding becomes in terms of the techniques used to master the usage and implementation of languages. In no way therefore multilingualism is responsible for any language delays or dysfunctional comprehension (Baur & Meder, 1990).

Fighting the Neuromyths

While we enter ourselves deeper in the digital era, we all the more have easy and rapid access to a vast amount of information. However, it is unfortunate to realise that neuromyths shape a major part of the brain related knowledge. For, nowadays it seems difficult to effectively reverse this false taken path which practically harms educational growth and progress. Then, what can we do perhaps to achieve a positive equilibrium towards neuromyths' extinction?

One way could be to more effectively train and inform professionals in academia and schools on how to handle neuroscience and brain development. Especially to those who work in developmental settings, we should guide their acquisition of knowledge towards the right neuroscientific facts of neuromyths, while presenting them with all this basic information on how the brain works, in order to be able to spot and effectively handle evidence distortions. This approach, on the one hand could mean that all brain information may be used at an interdisciplinary level more efficiently between scholars, while on the other hand, new generations can benefit from this movement in applying brain facts and information on various other professional contexts that are not directly connected to the brain science.

Additionally, a second way would be to increase public exposure on these matters, showcasing evidence of information malpractice. In this way, the more personal and family context are effectively approached, providing a stable basis for reorganising knowledge in its roots, rather the later stages of academic development where 'remedy' of concepts and perception can be much more difficult. In this case, every-day life can directly benefit it-self, while blocking of wrongly communicated information will be further established due to the practical consideration and extension the brain data will enjoy in our lives.

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Does the Current British Higher Education System Really Prepare Graduate Animation Students for a Developing and Changing Industry ?

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Abstract

There is a current trend in UK and Europe for animation students to work on group projects during their studies. ‘Creativity is not purely an individual performance. It arises out of our interaction with ideas and achievements of other people. It is a cultural process.’ (Pg 12. Robinson). Gobelins in Paris, was one of the first animation schools to start this trend and the final films were slick and professional with an incredibly long list of credits. Many of the graduates went straight into industry working as technical operators, animation assistants or riggers and many UK animation schools soon followed suit supported by institutions like Skillset (a UK government body set up to link industry with education). The idea has been championed by industry and a trend has started for animation courses to apply for Skillset or other similar accreditation bodies to give their courses a stamp of approval. These accreditation bodies have a say in how the course curriculum is taught and if the courses don’t follow their advice, there is a danger that this stamp of approval will be removed. The question is, does this turn out interesting creatives or factory style technicians specialising in one skill to fit into a large team of people. Robinson also goes on to say, ‘Creativity requires an atmosphere where risk taking and experimentation are encouraged rather than stifled’ (Pg 12. Robinson) . Is this ‘group work training’ a short sighted solution for today’s industry creatives and directors to solve an immediate skills shortage or will this strategy keep the British animation industry at the cutting edge of creativity and innovation on the worldwide stage?

(Max. 250 words)

Keywords: (3-5 words) Education, Industry, Animation, Economy, Creativity

Introduction

There is a current trend in UK and Europe for animation students to work on group projects during their studies. 'Creativity is not purely an individual performance. It arises out of our interaction with ideas and achievements of other people. It is a cultural process.' (Pg 12. Robinson) Gobelins is one of the first animation schools to start this trend and the final films were incredibly professional and so they should be with the accompanying long list of credits. Many of the graduates went straight into industry working as technical operators, animation assistants or riggers for special effects and many UK animation schools soon followed suit supported by institutions like Skillset (a UK government body set up to link industry requirements with education). The idea has been championed by industry and a trend has started for animation courses to apply for Skillset or other similar accreditation bodies to give their courses a stamp of approval. This stamp of approval helps with recruitment so Universities are keen to encourage this practice. These accreditation bodies have a say in how the course curriculum is taught and if the courses don't follow their advice, there is a danger that this stamp of approval will be removed. The question is, does this turn out interesting creatives or factory-style technicians specialising in one skill that they can fit into a large team of people. Robinson also goes on to say, 'Creativity requires an atmosphere where risk taking and experimentation are encouraged rather than stifled' (Pg 12. Robinson). Is this 'group work training' a short sighted solution for today's industry creatives and directors to solve an immediate skills shortage rather than a longer term solution for the durability of the British animation industry and it's inventive and imaginative place on the worldwide stage. Traditionally, UK animation courses have encouraged students to create their own film, and engage with the whole animated film process rather than one part of the production pipeline. This creative freedom gives students the chance to find their own style, and voice. It is a risky process but has produced some brilliant animated films that have gone on to win various awards both in the UK and abroad including Oscars, Bafta's and the Grand Prize at Annecy. This method of teaching seems to be fading away and is gradually being replaced by group projects. 'Many Organisations stifle creativity in the structures they inhabit and the ethos they promote. If ideas are discourage or ignored, the creative impulse does one of two things. It deserts or subverts the organisation' (Pg 12. Robinson). Heather L. Hollian discusses this in her article about group projects or individual genius published on the SAS Animator Blog in 2013 and likens it to the artist training system of the Renaissance where artists such as Raphael, directed a large, capable and creative workforce to work on his vision for the Pope's private apartment's in the Vatican. It is without doubt Raphael's designs,

and rather like a large animation studio, he assigns jobs according to the artist's technical and creative ability. However, without this large workforce, there is also no doubt that Raphael would not have finished, and yet there is no reference to any of the artists that worked on this vision or sense that they had a creative rather than technical input. In short, it appears as though, the nature of the big animation studio, is exploitative, uncreative and yet an absolute necessity for the completion of the project. Have we moved on so little?

I.

E.G. Lutz explains in his influential 1920 volume, *Animated Cartoons: How They Are Made Their Origin and Development*, that hierarchical delegation was key to the process, just like during the Renaissance. According to Lutz, the chief animator should keep the most important parts of the short for himself and delegate the rest to assistants, (Lutz p.61) while the "staff of helpers," as Lutz calls them, is meant to do just that and nothing more (Lutz p.185). And in truth, the rushed production schedule of this era left little to no time for creative collaboration between individuals. Does this sound familiar? It will do to any animation educator in the UK. Skillset and the government, led by the influences of industry, are currently trying to encourage a similar scheme in Higher Education establishments to prepare students for industry. The usual process that most institutions take is the following; all the students are allowed to pitch their idea as a potential film. The best pitch is chosen and then the rest of the students are divided into production roles: animator, assistant, background artist, special effects etc. This means that one student takes on the role of chief animator or the Raphael role and the rest are the "staff of helpers". There is nothing wrong with wanting to prepare students for industry, particularly when the cost of studying for a degree is so expensive, but the question isn't whether to prepare students for industry but how to prepare students for industry. If we don't give students the room to explore, create, and question who will be the next visionary film-makers and without visionary creatives who will come up with the ideas for next big blockbuster films and TV series. Students from countries like China are queuing up to study animation in the UK where creativity, originality and experimentation have traditionally been at the heart of most animation courses. In China, the teaching methods are very different and students are encouraged to concentrate on technical skill rather than research and experimenting. China has a huge animation workforce and a tremendous amount of feature films from other countries are shipped out to China to be animated. Chinese students don't want to work in these animation workforces for other countries, they want to make their own films, reflecting their own culture and

rightly so. Why are we preparing most of our students to be technicians when countries like China are keen to become creative leaders and coming to the UK to find out how to do this? This begs the question, who does this current trend towards group work benefit? It might produce slick, well made films made by a very technically capable team, but is this an education or a training akin to the Renaissance? Does this benefit the current animation industry or does it benefit the student? ‘As Carl Jung puts it, the creation of something new is not accomplished by the intellect alone but by the play instinct.’ (P133. Robinson, Ken). but as E.G. Lutz states, maybe we just don’t have time to be creative anymore. Twenty or thirty years ago it was almost compulsory to go to university to enjoy yourself, to write creatively, explore extreme political ideology and engage with the world in a critical and idealistic manner. The final degree result didn’t really matter and most students weren’t obsessed with getting a first, but with how to change the world. The current generation of students have been subjected to repeated testing and it has left most of them feeling insecure, with an inability to trust their own instinct and innate creativity . Psychiatrist Dr Rory O’Connor from Strathclyde University feels that schools should spend more time on basic communication and problem solving and less on this testing. This testing produces a fear of failure. By not teaching people how to deal with disappointment and failure we are not preparing young people for life. Failure and disappointment are part of life and learning how to deal with this is a key life skill and without this skill, there is a danger that young people will become depressed and demotivated by the inevitability of life itself. Education reformer and champion of pragmatism John Dewey feels failure is instructive. Allowing students to try and fail and then work out how to succeed within an educational framework is confidence building. If graduate students understand the benefits of failure, when they experience it in the professional world, failure is more likely to be seen as an chance for change and less likely to be seen as loss of opportunity, stagnation or a catastrophic event. It is clear that today’s animation industry requires talented, imaginative, innovative staff who communicate well and work in teams but how can University staff find the time to nurture students to be like this with increasing numbers, pressures from government bodies such as Skillset and students who are too scared to take risks. Students are under so much pressure to achieve, and in the UK creativity or creative thought and process just isn’t currently valued. There is no government funding for creative or humanity courses, all the funding goes to science and technology. This has a knock on effect in several ways, creativity, design and the arts are undervalued, there is less investment in equipment, teaching and resources and the numbers of students studying these subjects dwindle. Is the government being short sighted by not encouraging and supporting an

already growing industry? In 2014, the GVA (gross value added) for the creative industries according to the British Government UK was 5.2% of the UK economy and was worth 84.1 billion pounds and in 2016 it is worth almost 10 billion an hour to the economy. Jonathan Ive, the designer of many Apple products including MacBook Pro, iMac, iPod and the Apple Watch studied art at Newcastle Polytechnic, not science or technology and yet, has gone on to one of the most successful designers in the UK. During his time at Newcastle Polytechnic, during his formative years he was given time and space to create. He was given time to experiment and fail. The UK currently has a reputation for creative, interesting animation. Auteur animators like Nick Park certainly didn't go through a rigorous training schedule currently promoted by Skillset or other industry accreditation bodies. He studied fine art at Sheffield Poly where he was encouraged to explore whatever medium he wanted, and then went on to specialise in animation at the National Film School where he was allowed as long as he like to finish his innovative and original film 'A Grand Day Out'. He wasn't given deadlines or forced to work in a team, but encouraged to take his time to finish his film and he didn't have a huge debt of tuition fees hanging over his head. Park has gone on to win several Oscars for Aardmans and has made the animation company, a household name. Park has brought millions of pounds into this economy. Other important and influential figures like Mark Baker and Neville Astley, creators of Peppa Pig, were also given the luxury of time to finish their final films and develop their own unique voice during their time in education at the National Film School. Mark Baker was nominated for an academy award several times before creating Peppa Pig with Neville Astley, another National Film School graduate. Peppa Pig is one of the biggest exports this country has seen and the company was recently sold for 140 million pounds to Entertainment One and is distributed world-wide in North America, South America, China, Europe and Australia. I once asked Mark what he thought about this system of training people for industry and he replied saying he had never had any 'training' He just got on with it, and muddled along. He said he learnt by mistakes and a desire to make a good film. Phil Hunt, now creative director of Studio AKA, Soho London and a Royal College of Art graduate was also given space to create his own film and develop his own voice. Today's leading creative voices have shaped the British animation industry and yet they don't appear to have experienced any kind of rigorous training, testing and re-testing but were engaged in the kind of education where students were expected to question, research and explore ideas. They were encouraged to take risks and to fail. These educational methods have informed and shaped the British animation industry and have made it the economic success it is today. This creative, exploratory form of education is something today's students just aren't

encouraged to engage in. The current climate in the UK actively seems to discourage creativity in education and academia but champions science and industry. ‘The logic of the current reform model has one central flaw: it is, at heart, doubtful of the value of teacher professionalism.’ (Hallgarten, 2016) The government plays so much emphasis on industry and raising standards that it seems to have stopped listening to the educators or trust their judgement in relation to their own subject matter in particularly within the arts. Of course there is nothing wrong with wanting to raise standards, all lecturers want to raise the standards of their students but by making them think and question rather than just training them to use the right software or be part of the production pipeline. Yet the results of this past approach – chaotic, experimental, thought provoking - has seen some of the most ground breaking, innovative and now commercially profitable work. ‘If we can set creativity and leadership on the same path, there’s hope for an innovation-driven education system yet.’ (Hallgarten 2016) In turn this should lead to an innovation-driven industry ready to engage and in fact instigate change. Is this possible in today’s climate? At the moment, there appears to be little respect for academia and it’s role, particularly in the arts, think of phrases like “Oh it’s all academic.’ which infers it is just idealistic, without any grounding or reference to reality. Today, students feel they just can’t afford to fail, they must get into industry so the money spent on the course is valid. This testing and re-testing sets them on a path where they are scared to inquire, probe or analyse without clear guidelines telling them how. The most asked question at most UK Universities is, “How do I get a first?”. Students have grown up in a system where achieving a good grade is all that matters so how are they going to cope in the real world where in order to survive, they will be expected to adapt in an ever-changing industry. Software and technology change so rapidly that it is hard to keep up with it but if students are given the confidence to learn for themselves, adapt and deal with failure, this constantly changing environment will be much easier to deal with.

Conclusion

Students need to be given the space, time and money to engage properly with education. Is it a coincidence that suicide rates in the UK have risen since 2008 and yet in Scotland, where they don’t have tuition fees, they have dropped. In 2008 the fees in the UK rose to £3225 a years and then in 2010 to £9000. Today young people in the UK leave University with a debt of at least £40,000. No wonder they don’t want to take risks or take the time to explore. Students want to be given the answers without the risk of getting it wrong. Failure and disappointment can lead to creative, innovative and original solutions and by not allowing students the space to think

independently, experiment and then fail, we are taking away their confidence in their instinct, their ability to take risks and their chance to be original and creative. The animation industry may have a skills shortage and there is a need to provide training for these gaps, but there is also a need for creative and innovative teaching so that students can engage critically without fear of getting it 'wrong'. Interestingly, Skillset appears to be an authority on the animation industry and how to get into it, but after some research into their website it states quite categorically that there are no animation companies in the North West of England. This isn't true, there are a number including MacKinnon and Saunders, Cosgrove Hall and many more. I contacted some of these animation companies to ask them what skills shortages they were looking for, and a number of them said that they didn't want specialists, but generalists, students who know the whole production pipeline and can adapt to challenges or had an ability to learn new software independently. They were looking for students who had ideas as well as technical knowledge and potential. Some of the companies also commented on how group projects gave an unfair representation of the students ability. This practice allows students to hide behind the work of others who are more capable and even take credit for it. A few years ago I was working at the animation production company Loose Moose in London when a new graduate popped in on the off chance that someone would look at his reel. After watching this incredibly professional film we all told him how impressed we were. He was very pleased and asked if there was any work going. There was, but on further questioning about the film and how it was made, it became clear that he couldn't answer the questions adequately and it seemed blatantly obvious that he had a very small minor role in the production of this film. Yet this graduate was going round Soho in London knocking on doors and using it to get work. It seems that government bodies like Skillset aren't the voice for the whole of the animation industry after all and animation staff should rely on their own knowledge of the industry and established teaching methods to education animation students. There are a variety of skills needed by animation students today; technical, creative, craft-based, critical engagement and reflection as well as time to fail and then succeed. Links with industry are essential for any animation course as well as a good set of skills and understanding for the animation process but so is the time to experiment, critically engage and reflect without the fear of judgement or failure. Maybe it is time for Skillset to encompass a more varied and creative approach to employability.

This article is written by academic Sarah Ann Kennedy-Parr who worked in the animation industry for twenty years in a variety of roles; writer, director, creator, voice artist, executive producer and animation director before entering academia.

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The Relation Between ‘Student Loyalty’ and ‘Student Satisfaction’ (A case of College/Intermediate Students at Forman Christian College)

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Abstract

Due to the increase in the number of educational institutions in the past few years, the competition has significantly increased. This change in the environment has shown the declining trends in enrollments and also in low quality students. It is becoming extremely important that policy makers of educational institutions find ways to increase the loyalty of their students. Such type of student loyalty can help in marketing the institutions by spreading a good word of mouth. In order to do so, institutions should find the areas which contribute more in student loyalty towards their institution. This would also help to identify ways of attracting prospective students with tailored and aggressive marketing programs. The study was conducted with College/Intermediate students of Forman Christian College (FCC), a two-year data has been considered to find the relationship between “student satisfaction” and “student loyalty” (spreading a good word of mouth and recommending their institution to others). 2,309, FCC students were surveyed, and correlation and regression analysis was performed to establish a model to predict “student loyalty” as a dependent, using “student satisfaction” as an independent variable. After performing the data analysis it was discovered that some of the satisfaction areas contribute in student loyalty as compared to others. Based on the results some suggestions and recommendation were made by the author that can help in creating a positive word of mouth among their alumni students, which can help in attracting good students for FCC.

Keywords: Student satisfaction, student loyalty, factor analysis, regression analysis

Government of Pakistan is making a lot of effort to improve the education system in Pakistan and improve the literacy rate. In order to make this happen, the government needs to strengthen the primary, secondary and intermediate education, this will lead to a good number of students in higher education for improving the literacy rate. The Government of Pakistan announced PKR 64,014 million budget for education for the year 2014-15 (Government of Pakistan Finance Division Islamabad, n.d.).

Almost 4,515 intermediate colleges are operating in Pakistan for the years 2011-12 and the government is very hopeful that this number would increase (Ministry of Finance Government of Pakistan, n.d.). Intermediate education connects secondary education with higher education. In Lahore only about 136,433 students took the intermediate examinations in 2014 ("Inter exam toppers," 2014). Other way to get into higher education is through an A-Level Cambridge examination, and high school which is opted by very few as compared to the number of students appearing in intermediate examination.

The competition amongst educational institutions is becoming crucial because a lot of institutions are offering Intermediate education. It is highly desirable for any institution to attract students with good academic standing and at the same time meet enrollments benchmark in order to run operations of the institution smoothly. In such a competitive marketplace, student satisfaction (with the campus life) is considered to be a key element in attracting good students. The administration works hard to provide its students with the best campus life experience. On the contrary, it also very important for the administration to find tools which can monitor, and also know what matters more to its students.

Student (customer) satisfaction and student (customer) loyalty have become buzz words for any university for devising strategies in attracting good students. The importance of customer satisfaction has already been recognized by the education industry. And a lot of success stories can be seen of the companies who have monitored and improved satisfaction; because they realized the importance of these activities in increasing their image, as well as their profits. Many organizations earn 80% of their profit from 20% of the customers (Lavinsky, 2014). If we talk about student satisfaction specifically, a lot of research has been conducted to measure student satisfaction in a past two decades. One of the earlier researchers in the field used a Likert scale of five choices to measure student satisfaction on six things: working conditions, policies and procedures, compensation, quality of education, social life and recognition. However, in the development of this field satisfaction scales have been developed through reliability scales and factor analysis to measure student satisfaction, and the factor varied from three to nine (Betz, Menne, & Klingensmith, 1970).

This study has built a framework to find the relationship between “student satisfaction” and “student loyalty” of intermediate students in Pakistan. Student (customer) loyalty is a very important concept in marketing, which details the ‘customer repeat purchasing behavior’ and ‘customer word of mouth’ (Carson, n.d.). Students are the major concern for an educational institution, and the satisfaction of them shows the success or failure of the institution’s operation and its working. Many studies have been conducted on student satisfaction and customer loyalty in the context of business. Very few have worked on this relationship in an educational institution. Therefore, this study has attempted to find relations between student satisfaction with the student loyalty of intermediate students at FCC in Pakistan.

Research objectives

This study was conducted to find the relationship between ‘student satisfaction’ and ‘student loyalty’. The main areas which we would be focusing on in this study are briefly described as follows:

- Find the relationship of student satisfaction and student loyalty, considering student satisfaction as independent variable and student loyalty as dependent variable.
- Construct a valid and reliable scale to understand the level of student satisfaction.
- Suggest some guidelines and proposition to the administration and policy makers, to better market their institution.

Literature Review

This study is conducted to find the relationship between student satisfaction (which is customer satisfaction) and their loyalty. Following literature has been reviewed about the customer or student satisfaction and customer or student loyalty.

Customer (Student) satisfaction

Customer satisfaction is considered to be the key concept of marketing and it is considered to be a main key to measure the marketing success (Burnett, 2008). Marketing is basically meeting the needs and requirements of the consumer (Keith, 1960). Marketing can be explained, as the art of discovering, making and delivering values to satisfy the needs and demands of the customer for making profit. He further explains marketing processes and argues if the company manages it well then it will survive otherwise the company will fail. The key processes included in it are identification, product development, attracting customers, retaining customers, a loyalty building of the customer, and finally fulfilling the order

(Kotler Marketing Group, n.d.).

Many organizations put a lot of effort to improve customer satisfaction and interest in this field and this is increasing. The number of articles on customer satisfaction have been considered to be over 15,000 (Peterson, & Wilson, 1992). Different studies have shown that it always costs more to get a new customer, then retaining the old. It was estimated that it costs five times more to gain a new customer, then retaining the old one (Naumann, 1995). Now-a-days a lot of companies are focusing on the non-financial measure to increase the profits. A study done on 78 state-owned enterprise shows that customer satisfaction as a non-financial measure is significantly associated with the future and present profitability (Zhang, & Pan, 2009). This implies that the CEO performance is directly related with the customer satisfaction in a sense; if customer satisfaction increases then the profitability also increases. And one of the evaluation criteria of CEO's performance is to see how company is making profit (Ittner, Larcker, & Rajan, 1997). It also greatly impacts the corporate image of the company (Pizam, & Ellis, 1999) and has a positive impact on the purchasing behavior of the customer (Seiders, Voss, Grewal, & Godfrey, n.d.).

Customer satisfaction depends on the offer made by the company and the expectation buyer has from that product or service. In general satisfaction of the customer can be said to be the feeling of preference or displeasure that result from comparing a product or service perceived performance to expectations. If the performance is less than expectation then the customer is dissatisfied and vice-versa (Kotler, & Keller, 2009). A lot of research has been done for understanding the process or approach to monitor and evaluate customer satisfaction (HM Government, 2007).

In this study we are measuring student satisfaction and the concept of student satisfaction is derived from customer satisfaction. However, the above mentioned concepts about customer satisfaction are related to business world. It was argued that customer satisfaction content should be modified in order to address the satisfaction in educational institution. It should include constitutional amendments, policies, goals and processes of education (Stone, & Thomson, 1987).

Student satisfaction is defined as the assessments of the students regarding the services provided by the university (Stoltenberg, 2011). When a student is happy with the services (education, facilities, etc.) provided by the university then it will have a good impact on the attitude and it is considered to be satisfied. When the student is unhappy with the services then it will have a negative impact on the student attitude so it would be considered dissatisfied.

Due to increase in a number of educational institutions, the focus of

educational institutions is not only imparting educational knowledge but also to focus on the student's overall experience for student development (Kezar, & Kinzie, 2006). One way to monitor and ensure students are getting the right mix of services which they look in their institution is to keep track of student satisfaction.

Educational institutions use student satisfaction to identify, improve and change the less satisfied services by the institution which helps in creating an environment which is more prone to adjusting and retaining good students (Kara, & Jr. DeShields, 2004). This is also an indicator that the institution thinks and becomes respondent to the student needs for creating institutional effectiveness.

Customer (Student) loyalty and purchasing behavior

Developing loyalty among the customers is considered to be one of objectives in marketing (Surrige, 2009). The customer loyalty is said to be in existence when customers tend to purchase product or service of the same brand or shop over an extended period of time, if such behavior prevails in the customer then it is considered to be loyal customer (Financial Times. n.d.).

Customer loyalty is based on the positive attitude towards product or service and buying behavior and does not include the customer attitude and value systems (Sudharshan, 1995). Study performed on 14 million stores, in person meeting over 1 million customers and studying the result of 2,000 business's loyalty program found that 20% of the company customers are loyal customer which accounts for 80% of total revenue and 72% of the visits for buying (Jarski, 2013).

Increasing customer loyalty is very crucial to any company as it directly affects the bottom line of the business. It helps in cost saving of the company in at least six areas. 1) lower marketing costs, 2) reduce transaction cost such as order processing and contract negotiation, 3) lower customer turnover expenses, 4) more positive word of mouth, 5) increase cross selling success, which leads to a large share of customer and 6) reduce failure cost (Griffin, 2002).

The behavior of loyal customers can be articulated in different aspects. One aspect, can be that the customer is considered loyal if he makes regular purchases of the product or service in question. They would be willing to buy all the things that a company would be offering, willing to make an image of the company and not be bothered with other company marketing campaign and ads (Griffin, 2002). And the other aspect is of recommending the product or service to others, for this a loyal customer will do the following things; recommend the company to others, praise the company in front of other people, regularly perform business with the

company, give priority to the company for buying product and encourage people off and on for consuming products of the company (Parasuraman, Zeithaml, & Berry, 1994).

If we put these different aspects in perspective we can say that loyalty can be seen in two ways, 1) doing purchases with the company, and 2) recommending the company to others. For the education institution, customer (student) loyalty can be better explained by recommending their institute to the others. Student Loyalty is defined as a student favorable attitude toward the higher educational institution through positive word-of-mouth by recommending the institution to others (Sim, 2011).

Customer Loyalty and Customer Satisfaction

A lot of literature has been published on the relationship between the customer satisfaction and customer loyalty. Most of the researchers focused on studying the correlation or association between customer satisfaction and their loyalty. It is evident from the studies that a positive relationship exists between customer loyalty and satisfaction.

The research done on the banking industry in Iran, suggests that a positive relationship does exist between customer satisfaction and loyalty. It was further reported that the loyalty of the customer is strongly associated with the financial performance of the bank. This indicates that satisfied customer gives rise to loyal customers and this helps in increasing the financial performance of the company (Nayebzadeh, Jalaly, & Shamsi, 2013).

Another study was conducted on pharmacies of the Portuguese for determining the relationship between customer satisfactions, service quality and behavioral intentions (which are basically linked with repeat purchase behavior which is the indicator of loyalty). The study suggests that the customer satisfaction directly affects the loyalty of the customers (Bastos, & Gallego, n.d.).

Dissatisfied customer will do the following: spread a negative word of mouth about the service, launch a complaint about bad service to the company or the supplier and even decide to switch the company or supplier due to the bad service that purchases service from other businesses. The study also showed that a correlation exists between dissatisfied customer and purchasing behavior (Gull, & Ifikhar, 2012).

The study done by using data of 151 retailers in Gauteng Province of South Africa shows that, customer satisfaction has association and effect on customer loyalty. The customer loyalty has a positive correlation with the customer buying intentions (Chinomona, & Dubihlela, 2014).

According to the above stated literature it can be concluded that customer satisfaction has strong association with customer loyalty. And

satisfied customer gives rise to loyalty and that result in good financial performance.

Methodology

The Intermediate classes of 2013 and 2014 were surveyed about their satisfaction and loyalty with Forman Christian College (FCC). All students were asked to participate in the survey. 2,896 Intermediate students were asked to participate in this survey and 2,309 completed the survey questions regarding their satisfaction with different things and their willingness to recommend FCC to others. The students were notified about this survey through the FCC Academic Office and the Intermediate Coordinator. Students filled the survey forms and submitted their responses online and were assured that their responses would be confidential and anonymous and they were encouraged to give their honest opinions.

The survey included background questions, satisfaction questions regarding satisfaction with faculty, accounts, facilities, discipline, activities, food and student life on campus. It also has questions on the willingness to join FCC and recommend FCC to others. Students were asked to respond on five-point Likert-scale to these questions.

Demographics

Following are demographics of the students as compared to the population who have responded the survey for analysis:

Table 1: Number and percent of respondents by program:

Intermediate Program	Sample		Population	
	n	%	N	%
Foundation in Arts (FA)	258	11	381	13
Foundation in Science (FSc) -Pre-Medical	509	22	616	21
Foundation in Science (FSc) -Pre-Engineering	858	37	1043	36
General Science	217	9	281	10
Intermediate in Computer Science	242	10	308	11
Intermediate in Commerce	225	10	267	9
Total	2309	100	2896	100

The table suggests that the sample is a good representation of the overall population and the response rate is 80%.

Analysis of data

Reliability and Validity

The survey instrument and its results were found to be reliable to run analysis on it. In order to check the reliability of the survey, split-half reliability analysis was performed. The split-half reliability test was considered to be a superior method of checking the reliability in comparison to test-retest reliability (Explorable, n.d.). Results of the test are as follows:

Table 2: Split-half reliability analysis:

Reliability Statistics			
Cronbach's Alpha	Part 1	Value	0.934
		N of Items	36
	Part 2	Value	0.952
		N of Items	35
	Total N of Items		
Correlation Between Forms			0.882
Spearman-Brown Coefficient	Equal Length		0.937
	Unequal Length		0.937
Guttman Split-Half Coefficient			0.937

As shown in table 1, the correlation is 0.882 which approaches to 1, this shows that there is a strong correlation which tells that there is an internal consistency of the survey results, and it is a good data to run further analysis on it.

Factor analysis

Factor analysis was performed on the data to construct scales from items. The Kaiser-Meyer-Olkin and Bartlett's test was performed for measuring the sampling adequacy. The KMO value of 0.974 and Bartlett's significance shows that the sample is adequate to perform factor analysis as shown in Table 3 (Eyduran, Karakus, Karakus, & Cengiz, 2009).

Table 3: KMO and Bartlett's Tests:

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.974
Bartlett's Test of Sphericity	Approx. Chi-Square	29486.41
	Df	1830
	Sig.	0.000

Principal component analysis was performed in order to make factors from the items, as the correlations between questions were not strong. As a general rule Eigen values greater than one were considered to make factors student satisfaction items from the rotated component matrix. The items with factor loading greater than 0.2 were retained and others were deleted. Factor loading 0.3 or above is recommended (MacCallum, Widaman, Zhang, & Hong, 1999), but we have chosen 0.2 as a cutoff. Out of 69 items in satisfaction scale 61 were retained and nine factors were made explaining 54% of the variance, which is considered to be fine percentage variance explained (Beavers, Lounbury, Richards, Huck, Skolits, & Esquivel, 2013). Table 4 illustrates initial and extracted Eigen values as shown below:

Table 4: Initial and Extracted Eigen values using Principal Component Analysis:

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	21.637	35.471	35.471	21.637	35.471	35.471	6.359	10.424	10.424
2	2.295	3.762	39.232	2.295	3.762	39.232	5.799	9.507	19.931
3	1.734	2.843	42.075	1.734	2.843	42.075	4.894	8.024	27.955
4	1.438	2.358	44.433	1.438	2.358	44.433	4.006	6.567	34.522
5	1.357	2.225	46.658	1.357	2.225	46.658	3.433	5.627	40.149
6	1.301	2.133	48.791	1.301	2.133	48.791	2.743	4.497	44.646
7	1.107	1.814	50.605	1.107	1.814	50.605	2.689	4.408	49.054
8	1.081	1.773	52.378	1.081	1.773	52.378	1.672	2.742	51.796
9	1.011	1.657	54.035	1.011	1.657	54.035	1.366	2.239	54.035
10	.966	1.584	55.618						
11	.936	1.534	57.153						
12	.895	1.467	58.620						
13	.885	1.452	60.072						
14	.857	1.404	61.476						
15	.849	1.392	62.868						
16	.837	1.372	64.239						
17	.807	1.323	65.562						
18	.755	1.238	66.801						
19	.746	1.222	68.023						
20	.722	1.184	69.207						

Extraction Method: Principal Component Analysis.

Seven factors were made from 61 items; these factors were extracted through the rotated component matrix. The factor name and items with factor loading are shown in the following table 5:

Table 5: Items, factor name and factor loading:

Factor Loading	Factor Name and Items
	<i>Satisfaction with College Administration</i>
0.7	4. My money is handled accurately by the Accounts Office.
0.6	49. The Accounts Office answers my questions accurately.
0.5	17. The administration is cooperative.
0.4	11. Fines are given in a fair way when students break the rules.
0.2	12. Events on campus are well organized.
	<i>Satisfaction with Discipline and Values</i>
0.6	38. The "No smoking on campus" policy is enforced well.
0.6	45. The non-academic staff demonstrates the Core Values of FCC.
0.5	34. Students demonstrate the Core Values of FCC.
0.4	44. The faculty demonstrates the Core Values of FCC.
0.4	37. The administration demonstrates the Core Values of FCC.
0.2	64. I developed a personal sense of values while at FCC.
	<i>Satisfaction with Courses and instruction</i>
0.7	54. My classes are enjoyable.
0.6	60. I increased in my knowledge.
0.5	55. Class sizes are appropriate.
0.4	40. My classes are interesting.
0.2	70. Attendance records are well kept.
0.2	66. Attendance policy is strictly enforced.
0.2	7. The time tables of classes are good.
	<i>Satisfaction with College facilities</i>
0.6	5. There are places for prayer on campus.
0.6	42. FCC does a good job in saving electricity.
0.6	9. Overall condition of classrooms is good.
0.6	24. Good co-curricular activities are available for students.
0.5	22. There is good communication on campus.
0.5	27. Science labs are well equipped.
0.5	6. The campus has good athletic grounds.
0.5	31. The campus is beautiful.
0.4	19. The bookstore in Lucas Center has what I need.
0.3	26. The dispensary helps students who are sick.
0.3	8. The tennis courts are good.
0.3	18. Computer labs have good timings.
0.2	14. Good parking is available on campus.
0.2	53. FCC has a safe campus.
0.2	32. Computer labs have good equipment.
0.2	47. The swimming pool on campus is good.
	<i>Satisfaction with College faculty</i>
0.6	57. Teachers use English for teaching.
0.6	41. Food is available on campus for a reasonable price.
0.5	20. Faculty members are well qualified and experienced.
0.5	46. Quality of food on campus is good.

0.4	28. Faculty members convey knowledge to students in a good way.
0.3	13. Monthly exams grading are fair.
0.3	69. Faculty respect students from different backgrounds.
0.3	50. Faculty members are cooperative.
0.3	58. Teachers provided fair feedback on my progress.
0.3	67. Faculty members are punctual attending class.
0.2	63. Teachers returned tests in a timely way.
0.2	68. Faculty effectively manage difficult students.
0.2	25. Teachers complete the syllabus in time.
0.2	71. Teachers speak respectfully to students
0.2	61. Teachers made their expectations clear to students.
0.2	51. I can buy food on campus when I am hungry.
<i>Satisfaction with harmony</i>	
0.5	21. Students from all financial backgrounds are treated with respect.
0.5	33. Students of all religions are treated with respect.
0.4	15. Students from villages are given equal chances at FCC.
0.3	62. I was not threatened by different religious/ethnic/political groups.
0.3	59. Students made me feel welcome.
0.2	39. Students are given individual attention at FCC.
<i>Satisfaction with Skills development</i>	
0.6	23. FCC properly grooms students' personalities.
0.6	16. My leadership skills have improved.
0.4	43. At FCC my level of confidence has increased.
0.4	29. My ability to communicate in English has improved being at FCC.
0.3	48. My communication skills have improved.

Cronbach alpha reliability has been calculated from the factors which show the conformity of the factor grouping. The following rule of thumb for cronbach alpha values greater than 0.9 is considered excellent, between 0.9 to 0.8 is considered good, between 0.8 to 0.7 is considered acceptable, between 0.7 to 0.6 is considered questionable, between 0.6 to 0.5 is considered poor and less than 0.5 is considered unacceptable (Chiu, & Liu, 2008). All show cronbach alpha value greater than 0.7 which shows that the constructs reliabilities are at the acceptable level as shown in table 6.

Table 6: Cronbach Alpha Reliabilities:

Factor Name	Cronbach Alpha Reliability	Items	Number of Items
Satisfaction with College Administration	0.702	4, 49, 17, 11, 12	5
Satisfaction with Discipline and Values	0.780	38, 45, 34, 44, 37, 64	6
Satisfaction with Courses and instruction	0.803	54, 60, 55, 40, 70, 66, 7	7
Satisfaction with College facilities	0.902	5, 42, 9, 24, 22, 27, 6, 31, 19, 26, 8, 18, 14, 53, 32, 47, 41, 46, 51	19
Satisfaction with College faculty	0.902	57, 20, 28, 13, 69, 50, 58, 67, 63, 68, 25, 71,	13

		61	
Satisfaction with harmony	0.748	21, 33, 15, 62, 59, 39	6
Satisfaction with Skills development	0.817	23, 16, 43, 29, 48	5

Student Satisfaction

The intermediate students were satisfied most with the 'skills development' (mean = 4.20) and least satisfied with 'college administration' (mean = 3.80). Remaining factors have a mean above 3 (both satisfied and dissatisfied). Table 7 shows the mean values with standard deviation of different factors.

Table 7: Satisfaction of students on factors:

Factor Name (Satisfaction with)	Mean	Standard Deviation
Skills development	4.20	0.595
Harmony	4.19	0.544
Courses and instruction	4.14	0.572
College facilities	4.13	0.513
College faculty	4.07	0.563
Discipline and Values	3.99	0.630
College Administration	3.80	0.729

Regression Analysis:

Regression analysis was performed in order to establish a relationship between student satisfaction and student loyalty. Student satisfaction factors were considered as independent variables and used as a predictor of student loyalty. A student loyalty scale was made by using the responses on the following questions, willingness to recommend their institution to others, willingness to join their institution again; overall satisfaction to be part of the institution and this scale has a Cronbach alpha reliability of 0.690. Linear regression analyses were performed to establish a relationship between student satisfaction factors and student loyalty. Seven student satisfaction factors were considered as independent variable and student loyalty is considered as dependent variable. It can be represented by the following factors:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7$$

Y: student loyalty, which is defined as the willingness of students to join or recommend their institution to others and overall satisfied for being part of this institution.

X₁: Satisfaction with the college administration, X₂: Satisfaction with Discipline and Values, X₃: Satisfaction with courses and instruction, X₄: Satisfaction with College facilities, X₅: Satisfaction with College faculty, X₆: Satisfaction with Harmony, X₇: Satisfaction with the Skills development

Table 8 shows the results of the regression analysis, from the following result the equation can be written as follows:

$$Y = 1.023 + 0.151 X_1 + 0.078 X_2 + 0.162 X_3 + 0.018 X_4 + 0.059 X_5 + 0.096 X_6 + 0.157 X_7$$

Table 8: Regression analysis results

Variable		Beta	t	Sig.
Name	Symbol			
(Constant)	β_0	1.023	11.056	0.000
Satisfaction with College Administration	β_1	0.151	6.393	0.000
Satisfaction with Discipline and Values	β_2	0.078	2.822	0.005
Satisfaction with Courses and instruction	β_3	0.162	5.092	0.000
Satisfaction with College facilities	β_4	0.018	0.521	0.602
Satisfaction with College faculty	β_5	0.059	1.707	0.088
Satisfaction with Harmony	β_6	0.096	3.297	0.001
Satisfaction with Skills development	β_7	0.157	5.606	0.000
R = 0.618 Adjusted R ² = 0.381 F-value = 203.599, D-W = 2.034				

In the regression analysis the adjusted r^2 values show that 38% of the variability in the dependent variable can be explained by the independent variables. The value of r^2 greater than 20% is considered to be meaningful in behavioral and social sciences (Harper, Li, Chen, & Konstan, n.d.), and it shows that regression analysis depicts good results and no multicollinearity and autocorrelation problem exists (D-W = 2.034). The analysis illustrates that all the satisfaction factors (college administration, discipline and values, courses and instructions, harmony and skills development) have significant positive influence on student loyalty except 'college faculty and college facilities'. The findings of this study are consistent with the study results of previous studies done on customer satisfaction and customer loyalty and shows that a positive linear relationship exists.

Conclusion and implications

This study was conducted to determine and establish a relationship between student satisfaction and student loyalty. 2,309 intermediate students of Forman Christian College were surveyed about the satisfaction with different aspects of study life and their loyalty with their institution.

According to the results shown in table 8, all the satisfaction factors are above 3 which indicate that students were satisfied with their institution's performance. Students were most satisfied with skills development (mean 4.20) at FCC and least satisfied with the college administration (mean 3.80). However, in both cases they are considered to be satisfied as they are above the mean value.

Five of out of seven satisfaction factors namely satisfaction with courses and instruction, skills development, administration, harmony and discipline and values have a greater positive impact on student loyalty. According to the results satisfaction with "courses and instruction" has the largest influence on a student's loyalty. This depicts that students emphasized on the education standards which college has to offer during their stay of study here. They are interested in enriching their academic knowledge. This also shows that appropriate class size, the timing of classes and knowledge gained in classes are key components to satisfied students. The second factor which has the largest positive influence on the student loyalty is "skills development". A lifelong skill such as communication, leadership and confidence tends to contribute in creating student loyalties. Students are more interested in learning skills which will help in their grooming instead only academic knowledge; FCC should think of activities or seminars which can help students in this. The college administration should be organized and ready to help students in every best possible way they can; it also has good influence on the students. FCC should also think of ways to maintain harmony among different religion and financial background students. They can make more diverse demographic classes to increase harmony among students. Special consideration should be given maintaining the discipline and value system in the college. FCC should provide training to their professors to improve their teaching skills and professional knowledge. Moreover, FCC should maintain the level of facilities in order to built an environment for the students which can help them in learning and growing in number.

In order to attract good students, a lot of things can be shown to the students about courses and instruction such as class size, appropriate class timings, etc. Different activities can be explained to the students which show apart from academics a lot of other things such as, extracurricular activities etc., that are also integral part of life. Testimonials or presentation sessions from the old students can be a very useful marketing strategy in conveying an effective message to the potential candidates about the institution. Every satisfied customer brings at least four new customers through word of mouth advertising (Jain, 2012). Therefore, satisfied students lead to loyal students' which can bring new students for admission to the university for free by advertising through word of mouth.

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Occurrence of Equine West Nile Virus Among Horses in Qatar : A Preliminary Investigation

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Abstract

West Nile Virus (WNV) is an emerging threat to public health authorities around the globe. WNV is maintained in ecosystems primarily in enzootic cycles involving mosquito vector and avian hosts, with epizootic spread to mammals including horses and humans. Outbreaks of WNV disease in mammals have been associated with significant losses. The factors that play roles in the evaluation of these outbreaks are not fully known and the disease has not been reported in Qatar. We carried out a study to determine the prevalence of exposure to WNV in the State of Qatar and identify the factors that are likely to associate with seroconversion.

Keywords: Equine West Nile virus, Disease prevalence, Risk factors

Introduction

West Nile fever (WNF) is a viral disease that infects birds, humans

and horses causing an apparent infection, mild fever, encephalitis, meningitis, or death (WHO, 2013). The causal agent, West Nile virus (WNV), is a mosquito born RNA virus classified under the genus *Flavivirus* belonging to the Japanese encephalitis antigenic complex of the family *Flaviviridae* (ICTV, 2014). Originally identified and named by Smithburn and colleagues in 1937, the disease was known in West Nile province of Northern Uganda (IDA, 2004). Before 1999, WNF was only restricted to Africa, Middle East, Asia and East Europe. The first cases of severe human encephalitis caused by WNV were detected in elderly people in Israel in 1957 (Lindsey, Lehman, Staples & Marc Fischer, 2014). Since then, it was known that WNV could cause serious central nervous system infections in humans. In 1999 human cases of WNF including 41% neuroinvasive disease were reported to the Centers for Disease Control and Prevention (CDC) from 47 states and the District of Colombia in the United States (WNF, 2003). Birds are primary amplifier hosts for WNFV (McCoy, 2003) and the disease is maintained horizontally in nature through mosquitoes-birds-mosquito cycling transmission and vertically (CDC, 2010). Being responsible for transmitting infection to horses and humans, which are incidental hosts, 249-mosquito pool out of 4136 were tested positive for WNFV isolation in New York state, USA (Bajwa, O'Connor, Slavinski & Butts, 2014). Some studies indicated that ticks are clearly not efficient vectors of WNFV and therefore are unlikely to be important vectors in U.S (Lawrie, Uzcategui, Gould, & Nuttal, 2004). Contrary to this, a study documented the nonviremic transmission (NVT) of WNFV between infected and non-infected *Ornithodoros moubata* ticks (Higgs, Schneider, Vanlandingham, Klingler, and Gould, 2005). Migratory passerine birds were nominated potential dispersal vehicles for WNV (Owen, Moore, Panella, Edwards, Bru, Hughes & Comar, 2006). However, other birds including rock doves, gulls, robins, mallard ducks, hawks and eagles were tested positive for WNFV in the USA (MMM, 2002).

The fact that Qatar is a peninsula serving as a bridge and land to several migratory avian species, and that there is an increasing activity of importing wild birds in the country should draw attention to WNF epidemiology in the state. With a total number of 1081 approximating 20% of the equine population in the country (DAR, 2016), the active participation of horses in regional and international equestrian festivals of WNF endemic areas should be reconsidered in the light of their potential carriers of the disease always endangering the public health status in Qatar.

The purpose of this preliminary study was to determine the occurrence of WNV in Qatar, investigate possible prevalence of the disease among the Qatari horses, and to elucidate the factors that could play roles in exposure to WNV and their association with seroconversion.

Materials and Methods

Samples and data collection and processing

An approximate of 5-8 mL of blood serum samples were collected by venipuncture of the jugular vein from 260 horses stabled at 6 locations in Qatar in 2006 and 2014. Appropriate available records of each animal including location, age, breed and sex were recorded. Post blood clotting, all samples were immediately chilled and transported for further processing. Sera were prepared following the standard procedure after overnight incubation at 18-26°C. Each sample was aliquot into 2 mL cryovial tubes and stored at -80°C till used.

Determination of WNV antibody

The enzyme-linked immunosorbent antibody (ELISA-Ab) assay was used for determination of WNV IgM and pE Ab in the collected blood sera using WNIGM VER 0111 GB ELISA-Ab and WNC VER 0110 ELIA-Ab kits, respectively (IDVET, Innovative Diagnostics France). Both procedures followed the manufacturer's instructions. Determination of the results Using a 450nm WL-aided BioTek ELx808 spectrophotometric microplate ELISA reader, results obtained as optical densities were recorded, and the results were interpreted using Gen5.5 software version and a validated spreadsheet ELISA interpretation calculator.

Statistical Analysis

The prevalence of seroconversion to exposure to WNV was computed as the proportion of horses that tested positive out of all the samples that were examined. The significance of association between each factor and the likelihood of seroconversion to WNV was assessed us the univariate logistic regression. Factors that were significant in the univariate analysis were evaluated together in a multivariate to assess the effect of each factor while simultaneously controlling for the significance of other factors. The analysis was performed using the multivariate logistic regression analysis. The magnitude of the association between each factor and the likelihood of seroconversion was quantified using the odds ratio (OR). All significances were considered at type I error of $\alpha \leq 0.10$.

Results

All of the 260 horses were negative to WNV-IgM Ab eliminating evidence of recent exposure to WNV. 61/260 of the samples showed evidence of seroconversion to WNV-pE-Ab with a prevalence of 23.5%. The seroconversion rate of each of the samples collected from the 6 locations was shown in Figure 1. Within these locations the prevalence varied between 10% in location 2 to 35% in location 1. 15/60 of the horses

sampled from location 6 indicated evidence of seroconversion. Unfortunately, data on the other risk factors were not complete and these horses were not considered in any further analysis.

The significance of association between each factor and the likelihood of seroconversion to WNV are shown in Table 1. It was twice more likely to detect seroconversion to the WNV among horses samples from location 1 in comparison to horses sampled from location 5. All the other locations had a lower likelihood of seroconversion to WNV in comparison to location 5, but the risk was not significant (Table 1).

There was a significant association between the breed of the horse and the likelihood of seroconversion to WNV (Table 2). It was twice more likely to detect antibodies to WNV in samples collected from Thoroughbred horses compared to samples collected from Mixed breed horses (OR = 2.2).

Discussion

The primary objective of our study was to examine the possible evidences of exposure to the WNV among horses in Qatar and to determine the factors that could be associated with seroconversion to WNV. Although exposure to the virus had been reported before in other parts of the world, no evidence or report on the disease had been cited in Qatar. Noting that there is no report of the disease either in horses or in human in the Arabic Peninsula, evidence of exposure to the virus had been reported in neighboring countries including the United Arab Emirates, Iran, and Pakistan (Chinikar et al., 2013; Zohaib et al., 2015; Joseph et al., 2016).

Being the first report of exposure to WNV in Qatar, none of the sampled horses had a history of vaccination against WNV. As well, it was surprising enough to our observation that there was high seroconversion to WNV among the tested samples. Compared to the large difference in seroconversion proportion to WNV between horses sampled in Iran and Pakistan, WNV antibody prevalence among horses in Qatar somewhere fall in the middle. The factors that could account for the differences among these countries were not known. However, one speculative explanation could contribute to the disparity is the differences in the targeted animal species among the populations in these countries. Another factor could be the abundance of types of mosquito vectors in the ecological niches where the samples were collected (Moser et al., 2016).

Given that the investigation applied a competitive EISA technology detecting presence of anti-WNV-pE Ab and an indirect ELISA capture assay showing absence of anti-WNV-IgM Ab in these sera (CDC, 2015), the logical interpretation is the persistence of WNV-IgG Ab in the sera of these horses. The epidemiological data that eliminating previous exposure of these

animals to other encephalitis complex diseases would augment the rationale of specificity of these Ab to WNV.

We evaluated several risk factors that were expected to predispose to the likelihood of seroconversion to WNV. Among the breed of the horses there was high likelihood of seroconversion among throughbreds. None of the horses included in the study were vaccinated against WNV which leads to the conclusion that the seroconversion is real. Although there is no published data on the presence of the mosquito vector, the personal communication with entomologists in the country indicated the presence of *Culex* mosquito. Also, with Qatar being a magnet to a lot of immigrants and several flights arrive daily in the country, with some bringing live animals, one would not stamp out the presence of the mosquito vector. Additionally, while no data is available on the seroconversion among birds, the amplifying hosts of the virus, Qatar is known to be an annual migratory and exotic birds resort.

Conclusion

This study demonstrated for the first time that horses in Qatar have been exposed to the WNV, hinting at the possibility that the virus might be endemic in the country and has a potential to pose risk to human health.

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Ethical declaration

This is to certify that the authors of this submitted manuscript performed the study in accordance with the ethical standards laid down in the 1964 Helsinki Declaration and its later amendments. Moreover, all authors approved their consent prior to the conduct of the investigation.

Conflict of interest

The authors declare that there is no conflict of interest at individual or institutional levels concerning the investigation.

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Author contribution

The authors were contributed equally to the manuscript revision. MH and HO were contributed to the design of the investigation, analysis of the ELISA results and the statistical analysis, respectively and manuscript writing; ED contributed to design of the ELISA results validation and interpretation spread sheet; AS was contributed to data collection and ELISA performance.

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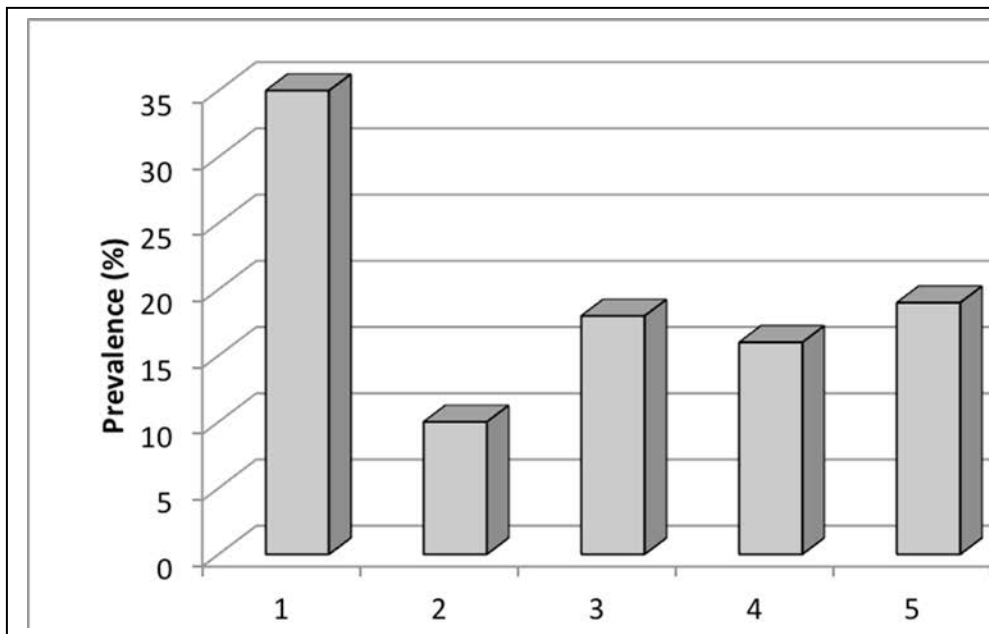
<http://www.cdc.gov/westnile/healthcareproviders/healthcareproviders-diagnostic.html>

Table 1. The association between each of the putative risk factors and the likelihood of seroconversion to WNV in locations 1 to 5.

Risk factor	Number positive	Number negative	Odds ratio (95% Confidence interval) I
Location			
One	24	44	2.3 (1.0, 5.2)
Two	2	18	0.5 (0.1, 1.9)
Three	9	41	0.9 (0.4, 2.4)
Four	4	21	0.8 (0.3, 2.5)
Five	7	30	1.0
Breed			
Arabian	22	87	(0.5, 2.2)
Thoroughbred	15	29	2.2 (1.0, 4.9)
Mixed	9	38	1.0
Sex			
Mare	33	80	1.6 (0.9, 3.0)
Gelding	1	27	0.1 (0.03, 0.8)
Stallion	47	47	1.0
Age (years)			
5<	4	34	0.4 (0.1, 0.9)
5-10	21	52	1.3 (0.7, 2.4)
>10	21	68	1.0

Table 2. Factors significantly associated with the likelihood for seroconversion to WNV in the multivariate logistic regression analysis among subject horses in locations 1 to 5.

Risk factors	Regression coefficient (Standard error)	Adjusted odds ratio and 95% confidence interval
Sex		
Mare	0.598 (0.411)	1.8 (0.9, 3.6)
Gelding	-1.820 (1.086)	0.1 (0.03, 0.9)
Stallion	0.0	1.0
Breed		
Thoroughbred	-0.663 (0.398)	0.5 (0.3, 0.9)
Arabian	0.0	1.0
Age (years)		
5<	-1.079 (0.597)	0.3 (0.1, 0.9)
5-10	0.247 (0.382)	1.3 (0.7, 2.4)
>10	0.0	1.0

**Figure (1):** WNV PrE-Ab prevalence rates among the subject horses at the six different locations tested at the survey duration.