

# The Contemporary Arab Contribution to World Culture



# The Contemporary Arab Contribution to World Culture:

*An Arab-Western Dialogue*

Edited by

Magdi Youssef

Cambridge  
Scholars  
Publishing



The Contemporary Arab Contribution to World Culture:  
An Arab-Western Dialogue  
Series: Towards a really rational World Culture

Edited by Magdi Youssef

This book first published 2018

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data  
A catalogue record for this book is available from the British Library

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ISBN (10): 1-5275-0848-X  
ISBN (13): 978-1-5275-0848-4

This book forms part of a new series of books prepared by editors from all over the world that is entitled Towards a really rational World Culture (General Editor: Magdi Youssef).  
In preparation: The Contemporary Indian Contribution to World Culture: An Indian-Arab-Western Dialogue.

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Participants of the IAIS Congress at the UNESCO in Paris, March 2009



Logo of the IAIS designed by the late Saad El-Girgawi, an Arab calligrapher and artist.





# CHAPTER ONE

## INTRODUCTION

MAGDI YOUSSEF

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### **Introduction**

These are no mere “proceedings” of a congress bearing a certain title. This is rather an argument bearing on the idea of Unity of Knowledge in our times. Therefore, the disciplines represented in this volume are representative of all branches or specializations of the arts and sciences in our present day: in the natural sciences, they are represented by pharmacology and industrial engineering, in the social sciences through political economy, and in the arts via architecture, which encompasses all sorts of plastic arts. And last not least, there is the field of contemporary literary discourse.

Yet the main concern of this volume is to challenge the impression, if not the common prejudice, either subtle or open, that contemporary production in all disciplines is only the privilege of the modern West, whereas Non-Western societies are thought to have nothing, or almost nothing to add to Western achievements in almost every respect.

Even though these non-Western societies are discriminated against and are socially and economically marginalized in our present-day world, they still have quite a lot to add to world knowledge in all disciplines and specializations. This very fact reminds me of my teaching experience in Egypt during the late nineteen seventies and early eighties at Tanta University. Tanta University is located in the middle of the Nile Delta and it is widely regarded as a provincial university recruiting its students from the neighboring agricultural areas. It is lacking so many of the services and resources dedicated to the capital of the country. But I felt closer to my students in that ‘provincial’ university than to those of Cairo, the capital,

who are much more privileged and yet much less avidly attempting to learn and to do research, compared to their peers in Tanta.

I am not necessarily drawing parallels between the marginalization on a global level and that on a national one, especially outside the Western hemisphere. But I want to address an illusion which exists in the minds of so many people, especially among the so-called educated, that the existing Eurocentric or Western standards and research results constitute an 'ideal' to be followed by all the other socio-cultures when dealing with nature and society. Such an illusory assumption does not only constitute a truly questionable belief in the West with regard to non-Western societies, but it is also widespread among so many members of the intelligentsia in non-Western societies.

It is for this reason that I have chosen the approach of an Arab-Western dialogue as a means of questioning and challenging the well-established stereotype of a West that must exclusively define scientific and scholarly standards. And to this end I have invited expert scholars from both the Arab World and the West to a scholarly meeting of the International Association of Intercultural Studies (IAIS) that took place at the UNESCO headquarters in Paris, France, in 2009. The papers presented in Paris and the proceedings of this meeting encompass a variety of representative disciplines. With regard to each of the disciplines discussed, an Arab scholar presented the results of his original research (or – as in the case of architecture - of his reflections on the innovative practical achievements in his discipline) while a Western expert added his critical commentary.

For the moment, there exists only a single exception to this rule in this first edition of the 'proceedings'. The Western commentary on Professor Dowidar's most valuable contribution to the analysis of the great economic crisis triggered by American banks in 2007/08 is still lacking, as we have to do without the comments originally verbally offered by Prof. Christian Sigrist (Münster University) who was incapacitated by his illness and sorely passed away afterwards. We are now waiting for an appraisal promised by Professor Michael Kraetke of Lancaster University that will critically focus on the politico-economic analysis of the global crisis offered by Professor Mohamed Dowidar (Alexandria University). It will be included in the planned second edition of this book.

To be honest, I have always wished to realize this scholarly meeting which materializes in a 'collective' way a cherished dream of mine, a dream embraced since my early youth, which expressed the desire to be able to specialize in 'all' disciplines alike. Which is obviously impossible in our times, even though our great ancestors, like Avicenna and Al-Farabi, could almost manage to do so. Yet the sheer ramifications of

knowledge in each discipline in modern times make it often very hard today to follow a research paper in a subsection of a branch of science that is different from one's 'own' specialization, let alone in a completely different field. This demonstrates the huge challenge I am facing with this volume, determined as I am to have recourse to the collective research work of all those experts of different disciplines, in order to be able to realize my objective of the Unity of Knowledge.

This volume is a provocative and challenging one. And therefore, it solicits discussion throughout. It is certainly hoped that it will inspire other similarly marginalized civilizations and socio-cultures worldwide to follow suit and give us, in a similar vein, examples of their contributions to world culture in all disciplines. To contribute to world culture certainly does not mean to 'start from scratch' (or even, to attempt to do so). Often, it may mean that one tries to draw on concretely existing – and often, inherited – solutions peculiar to one's specific socio-culture that arise out of its way of dealing with nature, either physically, socially or artistically. This especially in the three continents, Asia, Africa, and South as well as Central America. And why not also in each of the distinctive socio-cultures that exist in the 'Western World' itself? In doing so, we may in fact be re-testing the globalized norms that mostly stem from the West. Science can gain by drawing on one's own inherited pre-modern societal practices. As could be shown in the case of pharmacology, in this volume, certain norms of the U.S. Food and Drugs Administration (FDA) have been revised, and underlying assumptions have been corrected by having recourse to the empirical evidence and thus 'lessons' inscribed in inherited food consumption habits of Libyans rooted in their own traditional societies, as the Egyptian scholar of pharmacology, Professor M. Raouf Hamid has found while teaching and doing research at Al-Fatih University in Libya some thirty-seven years back.

The same rationale can be discovered in the attempt of Professor Hamed El-Mously, of the Faculty of Engineering of Ein-Shams University, to rely on the local populace, local knowledge and local renewable material resources of the Egyptian countryside in the context of a project that intends to sustain local societies and buttress the self-reliant position of especially women in those areas focused on, instead of having recourse to the abstract Western models, mostly embraced and reproduced by the United Nations' 'experts' that try to tell us how to 'develop' so-called 'backward oriental' societies. (This does not deny the possible plausibility of making use of either Western or non-Western inventions, in other words, of relevant insights wherever they may hail from, as long as this

choice springs from the *real needs* of human beings in the objectively varying *receiving context*.)

A corresponding rationale can also be encountered in a noteworthy approach to the housing situation of Egyptian agricultural workers that has been theoretically and empirically pursued by Hassan Fathy (1900 – 1987) in order to meet both social and ecological requirements that most of the ‘modern’ Western architectural approaches and ‘housing models’ failed to consider. Western-trained architects attempting to tackle the problems went for purely abstract, market-oriented designs which would cost a hell of a lot more and yet alienated the inhabitants from their inherited socio-cultural legacies and from the possibility of living in a far more intimate, psycho-socially and environmentally adequate ambiance. Similar challenges led to the reception of Fathy’s approach in Asia, West Africa, Arizona and South America. This example motivated the architect Rasem Badran, who acquired his PhD at one of the ‘top’ technological Universities in Germany, the Technische Hochschule Darmstadt, to revolt against - or at least take his distance from - the imported market-oriented abstract models of design, and to opt instead for the rationale inscribed in his native Arab-Palestinian-Jordanian traditional ways and forms of building peoples’ dwellings.

Both Rasem Badran and Hassan Fathy obtained their degrees at European universities. The latter studied architecture during the early decades of the 20th century at the Polytechnique in Paris. Both made use of their encounter with modern Western architectural tools and devices in order to develop a critical distance, and to re-discover the rationale of their native means of constructing dwellings in their own region.

The same approach was realized in the politico-economic analysis of Mohamed Dowidar, veteran Professor of Political Economy at Alexandria University in Egypt, when he produced his original interpretation of the massive global crisis triggered by the U.S. banks. This crash has usually been interpreted by Western analysts as a ‘financial’ one. Yet Dowidar’s seminal study has delivered the proof that it is in the first place the manifestation of a multifaceted global systemic crisis of a mode of production that is beset with a contradiction between the social nature of production and the private, incentive-based form of appropriation - a contradiction that has been irrationally dominating the present mode of production worldwide since its very outset, with all its risks, breaks and interruptions.

The fact that a researcher hails from a different socio-culture that is not identifying itself with the globalized modern Western mode of production, even though it is forced to deal with it and with its overwhelming

economic and juridical laws that are dominating everything almost everywhere (mainly through the world market), helps to recognize and therefore reveal various insights into the phenomenal contradictions mentioned above. Professor Dowidar stems originally from the countryside of the Nile Delta in Egypt and as such he is familiar with the native agricultural 'mode of production' in this region since his early childhood. How could he, as a mature scholar, distance himself as a thinker from his original setting, let alone allow himself to be identified with the Western modes of thinking, even though he makes use of Western tools of research? Hailing from his objectively different background, he had to come out with results different from those of the majority of his Western colleagues.

In my case, being a native Egyptian amply exposed to Western thought while teaching and doing research for decades at West German universities, it is, I think, apparent that I have found an alternative approach to the dominating Western research orientations in my way of interpreting the relationship of the various national literatures to each other and foremost to world literature.<sup>1</sup> I have advocated another approach, opposed to that of the acculturation theories, or those of an 'abstract reader' proposed by the Constance school, let alone the Western philologically oriented approaches in which not a lesser man than Edward Said himself has been almost completely embedded, as he was raised even back home, since his early childhood days, in the Western school system before emigrating to the US.<sup>2</sup> My approach is characterized instead by springing from what I call the "receiving socio-cultural context" that would be adding different perceptions to whatever it is 'receiving' in terms of 'alien' scientific research results, or in the form of 'alien' literary and artistic phenomena. My dear colleague Dr. Pflitsch, of the Free University of Berlin, has erroneously taken me, in his commentary on my paper, for an adherent of the hermeneutic trend of the Constance School, without realizing the deep divide between my approach, which stems from a social-scientific understanding of literary production and reception

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<sup>1</sup> See for instance my relatively recent study: *Decolonizing World Literature*, in: D'haen, Theo et al (eds): *Major versus Minor? languages and Literatures in a Globalized World*, John Benjamins Publishing Company: Amsterdam/Philadelphia, 2015, pp. 125-140.

<sup>2</sup> See my critique of Said's philological approach in my study: *The Myth of European Literature*, Symposium Press: Rotterdam and Aachen, 1998, pp. 30-32, see also its Italian version: *Il mito della letteratura europea* (pp.67-105), in: *La letteratura europea vista dagli altri* (a cura di Sinopoli, Franca), Meltemi Editore: Roma, 2003, especially pp. 87-90.

processes,<sup>3</sup> and the abstract hermeneutic one of Jauss and Iser in Constance. But such an amalgamating projection can easily take place by reducing radically different approaches to those of the dominant Western ones. Even the eminent German researcher and philosopher Juergen Habermas took me for an adherent of Jauss's hermeneutic approach when we met in Cairo during his visit to Egypt in 1997. So why not Andreas Pflitsch?! I have also fallen prey to such a cultural projection mechanism when projecting my native Egyptian socio-culture onto the Western, specifically Parisian one, while visiting the French capital for the first time when I was only 19. And yet, the more I became acquainted with French societal legacies, the less I became a victim of such cultural projections.

Needless to say that accurate scientific studies would help us to reveal the fallacy of such cultural projections, and would enable us to replace them by object-oriented recognition of juxtaposed socio-cultures.

At long last, the 'philosophy' of this exercise is to be summed up in the following tenet: What matters is, to start from one's own socio-cultural context when receiving whatever 'alien' cultures propose in all disciplines, and to be ready to re-consider and re-test those foreign cultural achievements in a methodological way that is springing from the *objective* difference of the receiving socio-culture. The accurate awareness of the objective difference of one's own socio-culture from that of the received one(s) would considerably enhance the possibility of adding new perspectives to those inscribed in the received culture(s) while being all the more rooted in one's original socio-culture. This stance would all the same lead to an enrichment of world culture. Such an alternative approach based on the full recognition of the variety of socio-cultures would be most refreshing and thus likely to invigorate human creativity in all disciplines worldwide.

In other words, the main issue addressed here is that the present one-sided and one-dimensional orientation in almost all disciplines worldwide – from the natural sciences to the social sciences, and including most discourses on literature and the arts – is being mainly Western in origin. The West – *which West* ?- undoubtedly is the new Mekka of research and the source of prevalent world views in modern times, to which the new generations in the so-called Third World are predominantly taking refuge,

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<sup>3</sup> See my paper: From A Philological to A Social Scientific Approach with Regard to Comparative Literary Research, in: Coutinho, Eduardo F. (ed): Beyond Binarisms: Discontinuities and Displacements: Studies in Comparative Literature, selected papers from the 28<sup>th</sup> congress of the International Comparative Literature Association (ICLA), held in Rio de Janeiro from July 29 till August 4, 2007, Aeroplano: Rio de Janeiro, 2009, pp. 14-19 (large-sized pages).

while subjectively attempting to give up their original socio-cultural legacies and languages. This does not only eradicate the inherited variety of human ways of dealing with nature that stems from different requirements to meet the various objectively existing socio-cultural needs in their own right. But the West's easy-going indulgence in its hegemonial trends in the name of 'global interconnectivity' leads to an impoverishment of the historically evolved Western ways and means themselves.

This critique is neither a 'romantic' one that would remind us of Goethe's resistance to the emerging Newtonian vision of the World – a vision that is, according to Goethe's judgment, 'violating' the intimacy of the apperception of nature, as represented in his "Farbenlehre" (theory of colours) that he opposed by *coining* his concept of *Weltliteratur* –, nor is it denying Western achievements, including the Newtonian and Post-Newtonian ones.

My epistemological critique of the today's overwhelming orientation of World culture towards a *one-dimensional* Western culture is based on an alternative proposition that contrasts with the one that is reigning today: Do not start, in the first place, from the body of research produced and encompassed by given individual disciplines (with all their ramifications) that have set standards worldwide, but spring – as a researcher rooted in a specific socio-culture – from your concrete (i.e., objective) socio-cultural context, guided by the quest to meet the sheer needs of *the majority* of your own populations.

I am working on this issue of *relinking* the long lost relations of most of the modern disciplines to their specific socio-cultural contexts by applying this approach to modern Arab-Western interactions in a variety of disciplines, starting in this book with a focus on research in the natural sciences today, and including discourses pertaining to the arts and literary productions . At the same time, I hope that the other socio-cultures that are dominated and often marginalized by the cultural hegemony of the West worldwide – like the Indian, the Philippine and Korean, the Thai, the Persian, and why not also the Turkish, the Greek and the Irish, too ? – would follow suit in attempting to change the pattern of dependence (and obliviousness of cultural specificities) inscribed in present-day overwhelmingly one-sided West-centered research in all disciplines. I hope that this book of collective research demonstrates a rational alternative to this questionable trend. See more about my project in the following link: [https://en.wikipedia.org/wiki/Magdi\\_Youssef](https://en.wikipedia.org/wiki/Magdi_Youssef)

Last but not least, I would like to acknowledge the great commitment and support of Andreas Weiland in the process of producing this book

(and reading its proofs!) as a token of old friendship that I value very much and am really grateful for. I would like to further thank Dr Tamer Lokman, of Badr University in Egypt, as well as Mr. Mustafa Ibrahim of the Faculty of Education of Ein-Shams University in Cairo for their help in meticulously proofreading this book manuscript.



**PART ONE –**

**THE CONTEMPORARY ARAB CONTRIBUTION  
TO WORLD CULTURE IN THE CURRENT  
NATURAL SCIENCES**

## CHAPTER TWO

# LOCALITY AS A SOURCE OF ORIGINALITY: A MODEL FROM PHARMACOLOGY. THE POSITIVE INFLUENCE OF CAPSAICIN (A COMPONENT OF THE LIBYAN TRADITIONAL FOOD HARISA) ON GASTRIC ULCER AND ON TRANSPORT ACROSS BIOLOGICAL MEMBRANES

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The summer of 1981 had witnessed two simple scientific contributions to the pharmacology of capsaicin, that were actually (as have been proved later on) introducing to the scientific communities of pharmacy and pharmacology two new unique, beneficial findings that were not preceded.

The first finding was the property that capsaicin enhances drug absorption (*Influence of capsaicin on buccal absorption of sulfathiazole*, Raouf Hamed et al., oral communication, the Abstracts Book, 8<sup>th</sup> international congress of pharmacology, Tokyo, Japan, 1981).

The second finding was capsaicin's potential of protection against peptic ulcer. (Raouf Hamed et al., *A protective effect of capsaicin against experimental induction of gastric ulcer in rats*, 41<sup>st</sup> International Congress of Pharmaceutical Sciences, Vienna, Austria, FIP 81 Abstracts Book, p.126).

The importance of these two preliminary works is, probably, not confined to their historical dimensions, as the socio-cultural circumstances that formed the environment and context of these two works (together with

the other related works done by the same authors during the years 1979 – 1984) unveil some hidden issues, or issues that are still somewhat fertile regarding the point of departure of scientific research in many of the African, Asian and South American countries.

Accordingly, the present paper is going to present the following:

- List of the works done.
- How and where these works started.
- The main pharmacologic knowledge about capsaicin at the time just before starting these works.
- The contributions that these works have introduced to the knowledge that had been existing when they were presented for the first time.
- Pathway(s) of the later development of the relevant knowledge.
- Possible lessons.

## **I. List of the works done**

### **(A) Works presented in international congresses**

1. Influence of capsaicin on buccal absorption of sulfathiazole.

The 8<sup>th</sup> International Congress of Pharmacology, Tokyo, July, 1981 (Abstract included in the Abstracts Book).

2. A protective effect of capsaicin against experimental induction of gastric ulcers in rats.

The 41<sup>st</sup> International Congress of Pharmaceutical Sciences, (FIP), Vienna, September, 1981 (the abstract is included in the Abstracts Book).

3. Influence of capsaicin on drug absorption and transport across biological membranes.

The 43<sup>rd</sup> International Congress of Pharmaceutical Sciences, Montreux, September, 1983 (the abstract is included in the Abstracts Book).

### **(B) Publications in periodicals**

1. Influence of capsaicin on drug absorption and transport across biological membranes.

I-Effect on buccal absorption of sulfathiazole.

J. Drug Res. J. Drug Res. Egypt, 16, 67 (1985).

[Note: Done at the Faculty of Pharmacy, Al-Fateh University (FPFU), Tripoli, Libya, 1979/80, and presented at the 8<sup>th</sup> International Congress of Pharmacology, Tokyo, 1981].

2. Ibid.

ii-Effect on gastrointestinal absorption of sulfamethazine sodium in rats. *J. Drug Res. J. Drug Res. Egypt*, 16, 73 (1985).

[Note: Done at FPFU, Tripoli, Libya, 1979/80, and presented at the 43<sup>rd</sup> International Congress of Pharmaceutical Sciences, Montreux, 1983].

3. Ibid.

iii-Effect on buccal absorption of glucose.

*J. Drug Res. J. Drug Res. Egypt*, 16, 77 (1985).

[Note: Done at FPFU, Tripoli, Libya, 1979/80, and presented before the 43<sup>rd</sup> International Congress of Pharmaceutical Sciences, Montreux, 1983].

4. Ibid.

iv- Effect on transport of glucose across frog's skin. *J. Drug Res. J. Drug Res. Egypt*, 16, 81 (1985).

[Note: Done at FPFU, Tripoli, Libya, 1980/81, and presented before the 43<sup>rd</sup> International Congress of Pharmaceutical Sciences, Montreux, 1983].

5. Effect of capsaicin on gastrointestinal absorption of acetaminophen.

*J. Drug Res. J. Drug Res. Egypt*, 16, 1, (1985).

[Note: Done at the National Organization for Drug Control and Research (NODCAR), Egypt, 1984, and presented at the annual scientific conference of the Egyptian Society of Pharmacology and Therapeutics, Alexandria, 1985].

6. Interaction of capsaicin with mixed function oxidizes: an in-vitro study interaction of capsaicin.

*J. Drug Res. J. Drug Res. Egypt*, 15, 253 (1984).

[Note: Done at the Institute of Toxicology, ETH and University of Zurich, 1983/84].

7. Interaction of capsaicin with mixed function oxidizes: ex-vivo and in-vivo study.

*J. Drug Res. J. Drug Res. Egypt*, 16, 29 (1985).

[Note: Done at the Institute of Toxicology, ETH and University of Zurich, 1983/84].

8. Influence of capsaicin on enzyme induction by phenobarbital in rats.

*J. Drug Res. J. Drug Res. Egypt*, 16, 61 (1985).

[Done at FPFU, Tripoli, Libya, 1981/82, and presented before the European Workshop on Drug Metabolism, Liege, 1982].

9. Evaluation of capsaicin mutagenicity by the Salmonella/mammalian microsome testing system.

*J. Drug Res. J. Drug Res. Egypt*, 18, 153 (1989).

[Done at the Institute of Toxicology, ETH and University of Zurich, 1983/84, and presented before the 19th Conference of the Pharmaceutical Society of Egypt, 1986].

10. Cytotoxicity of capsaicin.

J. Drug Res. J. Drug Res. Egypt, 18, 161 (1989).

[Done at the institute of Toxicology, ETH and University of Zurich, 1983/84, and presented at the 19th Conference of the Pharmaceutical Society, Egypt, 1986].

11. Effects of capsaicin on osmotic fragility of red blood cells in rats.

J. Drug Res. J. Drug Res. Egypt, 18, 169 (1989).

[Done at the Institute of Toxicology, ETH and University of Zurich, 1983/84 and presented at the 19th Conference of the Pharmaceutical Society, Cairo, 1989].

12. Effect of capsaicin on bleeding time in rats.

J. Drug Res. J. Drug Res. Egypt, 15, 207 (1985).

[Done at the Institute of Toxicology, ETH and University of Zurich, 1983/84].

13. The effect of capsaicin on the locomotor activity of rats in the residential maze.

J. Drug Res. J. Drug Res. Egypt, 15, 191 (1984).

[Done at the Institute of Toxicology, ETH and University of Zurich, 1983/84].

## **II. How and where was the start?**

In October 1978, the author had joined the staff of the Faculty of Pharmacy at Al-Fatih University, Tripoli, Libya, as a Lecturer in Pharmacology. By that time, the faculty was just a new one, with the most senior students starting their third academic year of undergraduate studies.

The author, then 30 years old, had to teach the second-year students their first course of pharmacology. Being a beginner in teaching, he had to ask the advice of the senior staff (the elder professors). The careful application of their advice did not help in stimulating the students' enthusiasm in learning pharmacology. Surprisingly, taking attendance of the students was the traditional way that was commonly practiced to keep them attending the classes. The author did not accept that tradition.

He felt that the real challenge is to have the students attending the lectures for the sake of learning and not due to compulsory attendance.

Accordingly, the author decided to rely on himself in discovering appropriate means of motivating the learning process. Fortunately, the Faculty of Education of that university was not too far from the Faculty of

Pharmacy. After two weeks of intensive readings about education, the author found out how far the on-going educational process was mostly a big malformation. He acquired an understanding about the essential modern concepts (and methods) of education. The major concept that he got firmly convinced of and therefore applied in his teaching was that the university student is a partner in the learning process and not a follower. As a result, radical changes were gradually taking place in the learning process of pharmacology. The outcome was well beyond the attendance records that he totally eliminated. As a result, the students became strongly interested in pharmacology to the extent that they asked for ways of modifying their training during the summer vacation (July and August) and expressed the desire to switch from working in pharmacy shops to training in pharmacological research.

Therefore, the students, along with their lecturer, became a research team. This was the first step in the first pharmacologic research work that took place at the Faculty of Pharmacy in Libya. It led to the above-mentioned pharmacological research works on capsaicin.

**The question now is: *Why capsaicin?***

The lecturer had to take into consideration several factors while selecting the research point (or the research project) that was to be tackled by the junior research team. A major factor was, as already mentioned, his contention that the students are partners in the educational process, and that the research activity is a part of the educational process itself.

Accordingly, he had to choose a research point that would help to let the students feel its importance and that would lead all the same to new contributions to knowledge. This consideration led him to choose *capsaicin*, the pungent principle in hot peppers that are called “capsicum”, as the subject of research. The research thus dealt also with “harisa” that is made mainly of red peppers and that constitutes the common part or ingredient of the three meals prepared each day by most people in Libya.

Based on the biological properties of capsaicin and the available knowledge in literature at the time, two research objectives were formulated from the very outset. One of them was to test the possible effect of capsaicin on drug absorption, while the other was to explore the truth regarding the widespread “COMMON SENSE” that capsaicin, being a pungent principle, leads to the incidence of peptic ulcers.

That was the first step which led to further steps later that year.

### **III. The main pharmacologic knowledge about capsaicin at the time just before starting those research works (in the late 1970s)**

Perhaps the most peculiar property of capsaicin that had been discovered before the 1980s was its ability to produce a desensitization of the nerve endings, following high or repetitive dosages (Jancso, 1986).<sup>1</sup> Capsaicin-produced desensitization was noticed to prevent neurogenic inflammatory responses caused by the application of nitrogen mustard (Carmas and Bito, 1980),<sup>2</sup> nicotine and acetylcholine (Jancso et al, 1961),<sup>3</sup> the electrical stimulation of the sensory nerves (Szolcsanyi, 1977 a, b),<sup>4,5</sup> or by orthodromic stimulation of pain sensitive nerve terminals with irritants (Jancso et al, 1967).<sup>6</sup>

Capsaicin was also known to produce hypothermia (Issekutz et al, 1950)<sup>7</sup> which was found to cause a fall in the metabolic rate (Issekutz et al, 1950 b<sup>8</sup>, Szulcsany, 1967).<sup>9</sup> And the administration of capsaicin in repetitive or high doses was found to cause desensitization to capsaicin's hypothermic action (Szolcsanyi, 1967<sup>9</sup>, Jansco-Gabor et al, 1970).<sup>10</sup>

Capsaicin was also reported to diminish the plasma extravasation response to histamine and bradykinin (Arvier et al, 1977,<sup>11</sup> Jansco et al, 1980<sup>12</sup>), and to result in a remarkable increase in gastric blood flow (Kolotat and Chungcharen, 1972,<sup>13</sup> Limlomwongse et al, 1979).<sup>14</sup>

Regarding the possible effects of capsaicin on the absorption or transport across biological membranes, it was found out that it alters the duodenal absorption of fats (Nopanitaya, 1973)<sup>15</sup> and inhibits the in vitro intestinal transport of glucose (Monsereenusorn and Glinsudon, 1978).<sup>16</sup>

Only very few works had been done regarding the possible effects of capsaicin on xenobiotics metabolism. It was reported to increase the microsomal P-450 (Kim et al, 1979).<sup>17</sup> Its reported effect on hexobarbital sleeping time in rats revealed a contradiction. In one of those reports, it was observed to prolong the sleeping time (Balint, 1972),<sup>18</sup> while in the other (Kim et al 1979),<sup>17</sup> capsaicin was shown to produce the reverse, i.e. a decrease in the sleeping time.

Some of the other effects of capsaicin that were pointed out in the literature by the end of 1970s, were its in vitro ability to labilize rat liver lysosomes (Smith et al, 1970),<sup>19</sup> to inhibit the Na<sup>+</sup> -K<sup>+</sup> -ATPase activity in the rat jejunum (Monsereenusorn and Glinsukon, 1979)<sup>20</sup> and to exert antibacterial effects against some microorganisms (Gal et al, 1968, 1969).<sup>21, 22</sup> In addition to that, capsaicin was even suspected, in an early report of the time (Hoch-Ligeti, 1951),<sup>23</sup> to be responsible for production of liver tumors in rats.

## IV. A review of our early findings

The performed studies may be classified into three major aspects:

- i. Studying the possible influence of capsaicin on experimental induction of peptic ulcer.
- ii. Studying the possible influence of capsaicin on drug absorption and transport across biological membranes.
- iii. Studying the possible effects of capsaicin in different test systems intended for exploring certain safety concerns.

Accordingly, the obtained findings will be presented in the following three sections:

### A. “The protective effect of capsaicin against experimental induction of gastric ulcers in rats”

The above-mentioned title was exactly the same one under which our work was presented, as a poster, at the international 41<sup>st</sup> FIP's congress in Vienna, in September 1981.

Certainly, there was an intention to formulate the presentation's title in such a direct way. The reason was simply that, at that time (1981), the general understanding (or belief), whether of the layman or even the scientists, was that capsaicin, as the active principle of hot pepper, constitutes a direct cause of induction of peptic ulcer. Meanwhile, we (as a small research team) had become highly convinced that this public understanding is nothing but a wrong COMMON SENSE, and that it is high time to report our findings to the scientific community.

In fact, this common sense was so strong that most of the scientists who looked at the poster did not hide their surprise and astonishment. In order to make it possible to realize the extent of surprise and astonishment that surfaced as a reflex to our work at that time (1981), we point to the following statement that was mentioned in a very recent publication:<sup>24</sup>

“The prevalent notion among a section of population in this country (India) and perhaps in others is that red pepper, a common spice, leads to “gastric ulcers” in view of its irritant and likely acid secretion nature. However, investigations carried out revealed that red pepper or its active principle, capsaicin, is not the cause for ulcer formation but ‘BENEFACTOR’.” [MN Satyanarayana, 2006].

Thus, if there is still a belief at 2006 that normal dietary ingestion of capsaicin (through hot pepper) causes peptic ulcer, and this even after the so many relevant research works have been conducted during the last few decades, then one can realize how deeply rooted this wrong common sense



was in 1981, and how the findings of our small research team were necessary in order to introduce a needed change.

What exactly were our findings? Were there any precedent findings that were similar and/or relevant in this context? And what was our explanation?

Actually, the communication that was presented at the FIP's international congress (1981), as documented in the abstract book,<sup>25</sup> showed that capsaicin protects against induction of gastric ulcer produced by two different experimental models in rats. The first model was the induction of gastric ulcer by prolonged forcible immobilization for 30 hours (Brodie et al, 1962<sup>26</sup> and Kandil and Gobran 1979).<sup>27</sup> It is denoted here as the "S-model". The other model, called the A-model, was that of aspirin administration (300mg/Kg) to pylorus ligated rats (Urishidani et al.).<sup>28</sup>

The taken criterion in the two models was the average number of ulcers per animal (Anichkov and Zavodskaya, 1968).<sup>29</sup>

In the two experimental models, the effect of capsaicin was tested through its oral administration, either in single or daily repetitive doses, before exposing the animal to induction of gastric ulcer.

On the one hand the utilized single doses of capsaicin, in the case of the S-model, were 1, 4 and 8mg/Kg, while the daily repetitive doses were 1, 2, and 4mg/Kg (for 7 days) or 2mg/Kg (for 14 days). On the other hand, only one single dose level of capsaicin (1mg/Kg) was utilized in the case of the "A-model", whereby two repetitive dose levels (2mg and 8mg/Kg) were applied for 30 days.

The obtained results showed that capsaicin decreased gastric ulceration by each of the two used models. Percentages of decrease in the number of gastric ulcers ranged between 13.33 and 80.55 in the single dose experiments. The maximum produced lowering in the incidence of gastric ulcers was produced by the single dose of 4mg/Kg in case of the S-model, and by that of 1mg/kg that was utilized in the case of the "A-model". The 7 days administration of capsaicin before exposure to stress resulted in dose-dependent reduction of the incidence of gastric ulcers, where the percentages of reduction were 30.75, 52.53, and 80.55 following the administered dose levels of 1, 2 and 4mg/Kg, respectively. When administering the dose of 2mg/Kg /day for 14 days, the reduction in the gastric ulcer incidence was 61.12%. The daily repetitive administration of 2 and 8mg/Kg of capsaicin before exposure to the "A-model" resulted in lowering the induction of gastric ulcers by 28.57% and 100% (i.e. full reduction), respectively.

The interpretation that the authors could propose at that time (1981) for the explored protective effect of capsaicin included two suggested mechanisms, namely the local hyperaemia and the desensitization of the sensory nerve endings. Later on, the two mechanisms were affirmed in more recent works while – also – other important mechanisms were explored.

### **B. The effect of capsaicin on drug absorption and transport across biological membranes**

The first reported finding indicating the potential of capsaicin as an enhancer of drug absorption was presented at the 8<sup>th</sup> International Congress of Pharmacology held in Tokyo in July 1981.<sup>29</sup>

This study was conducted on 22 volunteers who were themselves pharmacy students (18-22 years old). They were classified into two groups. Those who do not eat capsicum (6 students) are named “non-eaters”, and those who are used to eat it (16 students) are named “eaters”. The work utilized the model of buccal absorption that was introduced by Beckett and Triggs (1967).<sup>60</sup> The basis of the work was to assess the extent of buccal absorption of 10mg of sulfathiazole, in presence and in absence of a reasonable amount of capsaicin (0.024mg), during incubation of the drug solution in the buccal cavity for a short period (1 to 7 minutes). The obtained results showed that the “eaters” show significantly higher sulfathiazole absorption than those who do not eat capsicum, the “non-eaters”. Moreover, while the presence of capsaicin caused significant enhancement of drug absorption in both groups, the percentage of enhancement was much higher in the case of the non-eaters of capsicum. Therefore, the non-eaters of capsicum were found to be more sensitive to the enhancement of absorption by capsaicin.

The interpretation of the obtained results at that time included pointing to the observed higher enhancement of absorption in the non-eaters as an indication for the increase in blood flow as the main mechanism. This proposal was based on the already known property of capsaicin's desensitization of nerve endings following repetitive exposures to it.<sup>1</sup> Thus, the lesser degree of sensitivity of the eaters was associated with a lesser blood flow, and hence, a lower enhancement of absorption under influence of capsaicin. Also, another proposal was that the long-term use of capsicum as a spice (by the eaters group) may affect the membrane lining of the buccal cavity, where the effect may be a direct one (e.g. a cytotoxic effect) or an indirect one (e.g. an effect on blood flow).

The found enhancement of buccal absorption of sulfathiazole in healthy volunteers came in contradiction with the earlier reported finding of Monsereenusorn and Glinsukin<sup>16</sup> who reported that capsaicin inhibits the in-vitro transport of glucose across biological membranes. Thus, there was a need for further works to be done for the sake of exploration of more facts regarding our finding that capsaicin enhances drug absorption, and also regarding the contradiction with the above mentioned earlier report,<sup>16</sup> which was the only published one concerning the effect of capsaicin on transport of xenobiotics across biological membranes.

Accordingly, other studies were conducted in which the effect of capsaicin on drug absorption and transport across biological membranes was further explored. These studies included the effect on the in-vitro gastrointestinal absorption of each of sulfamethazine 30 and acetaminophen 31 in rats, the buccal absorption of glucose<sup>32</sup> in healthy volunteers, as well as the transport of glucose across (or into) the frog's skin.<sup>33</sup> All the findings of these studies, except that of acetaminophen, were presented at the 43<sup>rd</sup> International Congress of Pharmaceutical Sciences in Montreux, Switzerland (1983).

In the study of sulfamethazine sodium, each of the capsaicin and sulfamethazine were orally administered to adult rats in the dose levels 2mg/Kg and 80mg/Kg, respectively. The kinetics of absorption were assessed through the estimation of sulfamethazine in plasma along a period of 540 minutes. The obtained results indicated that capsaicin administration results in increasing each of the initial sulfamethazine plasma concentration (by 34.61%), the constant rate of absorption (by 75.59%) as well as the area under the plasma drug level (by 18.07%), while the constant rate of elimination was not affected. Thus, more evidence was produced regarding the enhancement of the absorption process by capsaicin.

Apart from that, there was a need to explore the case with glucose. The conducted study on the buccal absorption of glucose<sup>32</sup> utilized 3 concentrations of glucose (25, 50 and 100%) as well as 3 concentrations of capsaicin (0.5X, X and 2X, where X=0.096%). Three periods for the buccal incubation of the absorption of fluid were utilized, namely 3, 5 and 7 minutes. And the obtained results showed that capsaicin enhances the absorption of the three used concentrations of glucose, and that its effect (within the used range of concentrations) was concentration-dependent as the absorption increases with increasing capsaicin concentration.

There was a need to check the effect of capsaicin on the in-vitro glucose transport across (or into) biological membranes where there can be a possibility to investigate the effects of capsaicin in low as well as high

concentration. For this purpose, the transport across (or into) the frog's abdomen skin was utilized by using specially designed glass cells.<sup>33</sup> The site of transport was the internal surface of the skin. The experiments were conducted using 4 concentrations of glucose (50, 100, 300 and 600mg %) and 4 concentrations of capsaicin, namely 1X, 2X, 6X and 12X (where X=0.048 mg %). The obtained results showed that capsaicin enhances disappearance of glucose from the absorption site, and that its enhancement is dependent on the concentration of capsaicin where it was on the one hand progressively inhibited on increasing concentration from 1X up to 6X. On the other hand, the application of the highest used concentration of capsaicin (i.e. 12X) showed significant inhibition of the transport (or disappearance) of glucose.\*

Thus, taking into consideration that the utilized doses of capsaicin in our in-vitro studies were relatively low and close to the average range of the normal daily amounts ingested through meals, it was possible to conclude that proper doses of capsaicin enhance drug absorption and transport across biological membranes, and that an opposite effect may occur if capsaicin's concentration is high. In fact, the earlier reported inhibition of glucose transport under the influence of capsaicin (Monsereenusorn and Glinsukon, 1978) was the outcome of applying a capsaicin concentration that was about 24 times higher than the highest concentration used in our in-vitro experiments. Thus, it was possible to regard capsaicin's inhibitive effect on glucose transport as a consequence of its cyto-toxicity.

The increase of drug absorption under the influence of capsaicin was again confirmed through studying the acetaminophen gastrointestinal absorption in rats.<sup>31</sup> This study was conducted using the oral administration of 300mg/Kg of acetaminophen and 1 or 50mg/Kg of capsaicin. The obtained results showed that capsaicin administration results in increasing each of the initial plasma concentration, the constant rate of absorption as well as the area under the curve of plasma levels. The result was that either no, or only minimal additional effect was obtained by the 50-fold increase of the capsaicin dose. However, the administration of capsaicin was found to increase in a similar way the constant rate of elimination, an effect that was not found in the study of the gastrointestinal absorption of sulfamethazine in rats.<sup>30</sup> The proposed explanation was that capsaicin may increase the metabolism of acetaminophen, an explanation which may be

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\* *It must be frankly noticed here, after about 35 years of performing that experiment, that while it was too primitive, nevertheless, it served a lot in answering some of the arisen research questions in spite of the very limited technical facilities.*

supported by the finding that capsaicin is able to act as an enzyme inducer (Hamid et al, 1985).<sup>34</sup>

Regarding the effects of capsaicin on drug metabolism, two findings, contradictory to each other, had been reported, namely that capsaicin prolongs hexobarbital sleeping time, which may indicate an inhibition of drug metabolizing enzymes,<sup>18</sup> and that capsaicin decreases sleeping time, which indicates a stimulation of drug metabolizing enzymes. Our conducted experiments, regarding capsaicin and drug metabolism, indicated that capsaicin is able to activate the 4-hydroxylation of biphenyl in-vitro.<sup>35</sup> Following the daily subcutaneous administration of capsaicin (1 or 3mg/Kg) to rats for 3 days, the liver fractions showed an activation of the 4-hydroxylation of biphenyl, while no effect was shown regarding the 2hydroxylation process.<sup>34</sup> The activation of the 4-hydroxylation process, in absence of cofactors, was shown to be dose-dependent, where the highest used dose of capsaicin produced 85.44% of that produced by phenobarbital (50mg/Kg, ip daily for 3days). In the same report, the single subcutaneous administration of 3mg/Kg of capsaicin to rats was shown to prolong the duration of hexobarbital sleeping time, while the daily repetitive administration for 3 days resulted in abolishing induction of sleep by the same dose of hexobarbital (65mg/Kg, ip).

Actually, this in-vivo study, regarding the effect of single and repetitive subcutaneous doses of capsaicin on the hexobarbital sleeping time, was conducted while the controversy between the findings of Balint (1972)<sup>18</sup> and those of Kin et al. (1979)<sup>17</sup> was in mind. The complete variation between the effects of the single and repetitive doses in our work<sup>34</sup> allowed the proposal that the prolongation of sleeping time under effect of the single dose of capsaicin may be due to its induced hypothermia which had been earlier reported to cause a decrease in the metabolic rate.<sup>7, 8, and 9</sup>

On the other hand, the desensitization to the hypothermic effect of capsaicin following its repetitive administration<sup>36</sup> may allow the induction of the drug metabolizing enzymes to be evident, with the consequence of shortening the sleeping period or abolishing it.

### **C. Exploration of certain safety concerns regarding the effects of Capsaicin**

These studies were conducted at the institute of Toxicology of the ETH and the University of Zurich (1983/84). They included the assessment of capsaicin regarding its possible mutagenicity and cytotoxicity, as well as its possible interference with osmotic fragility of red blood corpuscles, bleeding time and behaviour.

Regarding mutagenicity testing (Hamid et al., 1989),<sup>37</sup> the testing system was that of the Ames test. Eight concentrations of capsaicin (19.5-2500µg/plate) were subjected to the test, utilizing 5 strains of *Salmonella typhimurium* and 5 diagnostic mutagens. The experiments were conducted in presence and in absence of the so-called S-9 Fraction, i.e. the microsomal fraction of rat liver homogenate together with the essential co-factors, as a source of mammalian metabolic activation. The obtained results indicated the absence of any mutagenicity by capsaicin or its possible metabolites in the Ames testing system. They also showed that the high concentrations of capsaicin exert a toxic (bactericidal) effect on some of the tested strains, namely TA100, TA1537 and TA1358. These results confirmed those previously done by Buchanan et al. (1981)<sup>38</sup> which were conducted on only 3 *Salmonella typhimurium* strains.

Cytotoxicity of capsaicin was in-vitro evaluated by means of the cell detachment and cell growth assays (Hamed and Reinhardt)<sup>39</sup> using three cell lines, BHK-21/C13 (Baby hamster kidney cells), Keller cells (human diploid fibroblasts derived from an arm biopsy of an adult female) and MRC-5 cells (human embryonic lung fibroblasts). The obtained results showed a concentration-dependent detachment of cells where the percentages of detached cells have reached a maximum within a relatively narrow range of concentrations (0.2-2mM for MRC and BHK cells, and 0.2-0.6mM for Keller cells). Regarding the growth assay, significant inhibition occurred only at concentrations higher than 0.02mM. Thus, the produced growth inhibition may be just a consequence of cell detachment, where capsaicin was found to be a potent cell detaching agent that could be classified according to Reinhardt et al (1985)<sup>40</sup> as a strong cytotoxic agent. On the other hand, the exposure to capsaicin, whether in-vitro ( $10^{-4}$  to  $10^{-2}$  M) or in-vivo, either orally (5 or 50mg/Kg) or subcutaneously (1 or 3mg/Kg), did not affect osmotic fragility of red blood corpuscles in rats as indicated by the mean corpuscular fragility (MCF). Here, it should be emphasized that the utilized high oral dose is about 50 times the assumed average of daily consumption for man (Monseernusorn et al, 1982)<sup>41</sup>, and that the given subcutaneous dose allowed the escape of the first-pass effects, if any. In addition, the highest utilized in-vitro concentration had resulted in super saturation of the test solution.

Accordingly, capsaicin is not liable to affect the red blood corpuscles membrane in man. The performed studies were extended to evaluate the effects of capsaicin on the bleeding time<sup>42</sup> where a significant prolongation was observed. The performed evaluation of the possible effect of capsaicin on behaviour was performed on the locomotor activity of rats by using the residential maze technique.<sup>43</sup> Capsaicin was found not to interfere with the

utilized test system following either its oral (5 or 50mg/Kg) or subcutaneous (1 or 3mg/Kg) administration.

## V. A short overview of the relevant international advancements

The most important outcome of the capsaicin works that were started three and a half decades ago by a small group of devoted young researchers and students at the Faculty of Pharmacy of FPFU in Tripoli, Libya, may be the findings concerning the enhancement of drug absorption and protection against induction of gastric ulcer. Both findings were presented for the first time during the summer of 1981 at the international scientific forums in Tokyo<sup>29</sup> and Vienna.<sup>25</sup> The reasons behind this consideration may be demonstrated as follows:

1. Each of the two findings was not preceded.
2. The finding concerning gastric ulcers had introduced knowledge that was totally opposing the globally existing common sense that prevailed in this regard. On the other hand, the finding of the enhancement of absorption was exploring a property that was not known for capsaicin, where the most pertinent finding that had been there was showing the opposite, i.e. an inhibition of the absorption (or transport).
3. Both findings were, probably, of considerable clinical relevance. The bases for this consideration include:
  - a. Possession of the two discovered properties at doses that are within (or close to) the daily average consumption dose of capsaicin.
  - b. Direct relevance of the two findings to the actual therapeutic demands and developments. In this regard, the findings of protection against gastric ulcer were further clarified later on by research of others where the originally proposed mechanisms appeared to be relevant and more advancements in the understanding of the possible mechanisms were accumulated. Moreover, capsaicin's role in the protection against induction of gastric ulcer was proved fully compatible with the later on explored pathogenic role of the bacterium "Helicobacter pylori" in the induction of gastric ulcer, where capsaicin was found to inhibit its growth<sup>44</sup> and to counteract its associated inflammation.<sup>45</sup> Added to that, the impact of capsaicin on drug absorption and transport across biological membranes was elaborated further on in the context of research on the pharmaceutical technological aspect of enhancement of drug absorption.<sup>46</sup>
  - c. A third point that should not be ignored is that the aim (or the point of departure) that led to each of the two findings was carefully developed. Actually, it was the outcome of three factors (or elements). The first one

*was the active surveying of the international literature on the subject. The second one was the concern that may possibly be connected with a population that was known to be very fond of including red peppers as a basic component in their three daily meals. The third one was the committed application of the scientific method of thinking, and this within the contexts of both the scientific knowledge we had as researchers and the attention we paid to the social specificities of the population in Libya and the demands connected with these.*

It may be interesting to note briefly that further research conducted on capsaicin and peptic ulcer proved that our earlier findings that had been announced in 1981<sup>25</sup> were correct, and that the proposed mechanisms were of high relevance. Moreover, further research done in the same area – which is still ongoing, and this very actively – reveals very important new findings and details on the mechanisms, and adds to the clinical aspects new insights and frames of reference regarding capsaicin and peptic ulcer.

An early work by Dugani et al. (1985)<sup>47</sup> pointed to beneficial interferences between capsaicin administration and the pathology of stress and gastric acid secretion in rats. Four years later (Lippe et al., 1989)<sup>48</sup>, intra-gastric capsaicin was found to enhance rat gastric acid elimination and mucosal blood flow by afferent nerve stimulation. In the same year, oral administration of capsaicin was reported to protect against aspirin induced lesion formation and bleeding in the gastric mucosa (Holzer et al., 1989).<sup>49</sup>

Similar protective effects of capsaicin were reported against the gastric ulcers produced by absolute ethanol (Uchida et al., 1991)<sup>50</sup> and against duodenal ulcers produced by stress (Ren et al., 1981)<sup>51</sup>. The beneficial effect of capsaicin against gastric ulceration was shown to include healing, where it was found to promote healing of acetic acid produced ulcers (Kang et al., 1996)<sup>52</sup> following its daily oral administration (5mg/Kg) along 7 days. The authors attributed the obtained effect to gastric hyperaemia. A Chinese study (Yeoh et al., 1995)<sup>53</sup> emphasized the protective effect of chilli (red peppers) against aspirin induced gastro-duodenal injury in humans.

More recently (Teng et al., 2008)<sup>54</sup>, pre-administration of capsaicin (5mg/Kg) was reported to inhibit the gastric mucosal injury produced by hemorrhagic shock, an effect which did not occur when capsaicin was administered after the hemorrhagic shock or after each of the preadministration of a high dose of capsaicin (125mg/Kg) or the exposure to daily intake of 360mg of chilli powder for 4 weeks.

The protective effect of capsaicin was suggested again to be mediated through capsaicin sensitive afferent sensory nerves (Urchida et al., 1991)<sup>50</sup> when the stomach (in rats) was vascularly perfused with capsaicin. It was



found to release calcitonin-gene related peptide (Holzer et al., 1990).<sup>55</sup> Adding to this, close arterial perfusion of calcitonin-gene related peptide into the rat stomach was found to inhibit aspirin-and ethanol-induced hemorrhagic damage (Lippe et al., 1993).<sup>55</sup> At the same time, the gastro protective effect of capsaicin was reported by Lamberecht et al., 1993.<sup>57</sup>

After the exploration of the definite role of *Helicobacter pylori* in the pathogenesis of gastric ulcers in human beings, the need emerged to test the effect of capsaicin on that gastric pathogen. And the obtained results showed that capsaicin inhibits its growth<sup>44</sup> and inhibits the release of the interleukin-8 (IL-8) which is a pro-inflammatory cytokine that is released by H-pylori infected gastric epithelial cells. Accordingly, capsaicin exerts an anti-inflammatory effect against gastric inflammation that associates H-pylori infection.

Regarding the other property of capsaicin, namely its ability to increase drug absorption and transport across biological membranes, it was utilized as a basis for producing patents on enhancers (or enhancements) of drug absorption.<sup>46</sup> The interest in that property was elaborated in research works assessing the influence of capsaicin on drug absorption.<sup>58</sup> It has also drawn the attention to the possible effects of diet on mucosal permeability to drugs (Smart, 2006).<sup>59</sup>

## Possible Lessons

1. Although the later paths of the research works on capsaicin indicate an originality of the point of departure of the research on capsaicin that had been started 35 years ago in Tripoli, one should still remember the conceptual obstacles that had faced that work. One obstacle was the resistance that arose on the part of the young local academic staff, all of whom had obtained a Ph.D. degree quite recently at the time. The general belief among them was – more or less – that the real scientific work was the kind of work they had engaged in already in the West where they had done their postgraduate studies. This mal-conceptualization on the part of the new academic staff in Libya drove them to deny and underestimate the obtained findings. The other obstacle was the surprise and – again – the underestimation with which the first works (especially that on gastric ulcer) were faced during their presentation at the international meetings (in 1981). In view of this, it is apparent that the frames of reference for developing research projects – and for evaluating the actual research done – in many countries of Africa, Asia and South America are in need of *more objective* scientific thinking.

2. Originality in research is not geographically dependent. Rather, it depends (among other factors) on the originality in choosing the research problems to be dealt with. Accordingly, the priority attributed to the problems to be subjected to research in developing societies should more suitably be connected with (or based on) their local circumstances, needs, traditions, etc.

3. If it is possible to point to the “globality” of the research significance as a measure for its benefit to human beings, then originality *in the locally done research in developing countries* would be a measure for its possible *globality potential*.

### **Acknowledgements**

All the Libyan and non-Libyan students who were partners in the capsaicin works are actually worth of my deep acknowledgment, not only because of their research contributions, but also because they could together, directly or indirectly, take an active role in changing the learning process at the Libyan Faculty of Pharmacy at that time (1979-81). Here, I would like to be honored by mentioning their names:

- 1, Aisha Al-Makhzoum
- 2, Aisha Al-Mankoush
- 3, Aly Brihimat (Algerian)
- 4, Aly Mahdi
- 5, Daal El-khamy
- 6, Fatma Shmela
- 7, Khadija Al-Zarrouk
- 8, Mufida Bahry Gundi
- 9, Wesan El-Khamy

Also, two members of the academic staff at Al-Fatih University (FPFU) have effectively contributed to the performed works, namely the late Prof. Dr. Salwa A. Metwally (an Egyptian) and Dr. Asma Hedyat (from Pakistan) who were lecturers at the time.

Thanks are also due to the dean of the Faculty of Pharmacy at Al-Fatih University during the period when the capsaicin research was conducted (1979-81), as he, Dr. Saad Al-Megrab, was so kind to allow and to encourage the research activity to be performed by the students during the summer vacation. Moreover, he gave his full support to the start of the research at that time. The existence of “originality” in the developing countries is, in my opinion, not debatable. However, the discovery, the

taking care, guiding and stimulation, and the networking and utilization, are all essential processes that suffer from serious neglect. That is why Prof. Dr. Magdi Youssef deserves honest acknowledgment for his theoretical and practical long-term efforts devoted to activating the role of the endogenous originality of the peoples of the African, Asian and South American countries.

The author of this study is indebted to the graduate research assistants, Mr. Amos Michael and Mr. Sami Gemal, for their generous help in making this paper ready for presentation.

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## CHAPTER THREE

### COMMENTARY ON THE STUDY ENTITLED “THE POSITIVE INFLUENCE OF CAPSAICIN (HARISA, IN LIBYAN CUISINE) ON GASTRIC ULCER AND ON DRUG TRANSPORT ACROSS BIOLOGICAL MEMBRANES” PRESENTED BY PROFESSOR M. RAOUF HAMED

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### **Introduction**

When Professor Hamed asked me to comment on his paper, I was, on the one hand, very much excited to read that already, in 1981, he and his team at the Al-Fatih University in Tripoli (Libya) had shown that capsaicin, the pungent ingredient in red peppers (Harisa in Libyan cuisine), reduced the formation of experimentally induced gastric ulcers in laboratory animals (Hamid et al. 1981). I was also taken by surprise to learn that he first presented these data at an International Congress of Pharmacy in Vienna (Austria), the capital of my home country. On the other hand, I was deeply saddened when I realized that I did not know this work at all. This fact and the considerations put forward by Professor Hamed in his paper inspired me to reflect on a number of issues related to the topic of this conference.

## **Recognition and neglect**

In my consideration of the work of Dr. Hamed's team in Libya around 1980, I am focussing on the aspect that capsaicin – contrary to common belief in Libya, but also in Europe – protects the stomach rather than hurting it. Dr. Hamed's presentation in 1981 came out in the same year as that by Szolcsányi and Barthó, two pharmacologists working at the Medical University in Pécs (Hungary). The findings made by Szolcsányi and Barthó (1981) were in essence identical with those of Hamed et al. (1981) and were published in a conference proceedings book that also had a limited circulation. I happened to get to know this paper because I entered into a collaboration with Dr. Barthó right at that time. My own work in this area did not start before 1985 but was fully confirming what Hamed's team as well as Szolcsányi and Barthó had reported before. My own work was also met with scepticism and prejudice, as is evident from a commentary in the Ulcer Research Alliance Bulletin (vol. 1, no. 1, 1988), a gazette of a closed circle of established ulcer researchers, which read: "... I heard rumours about the irreproducibility of certain capsaicin experiments". Fortunately, I was able to secure the support of more open-minded colleagues and subsequently could delineate some of the mechanisms behind the gastroprotective effect of capsaicin and the pathophysiological implications of this finding (Holzer 1998).

In his conference paper, Professor Hamed pinpoints the dilemma he and his team were facing in putting forward the thesis that capsaicin (or Harisa, which is a common part of the three meals of the day eaten by most Libyan people) is beneficial to the stomach whereas "common sense" among the lay and scientific community held that capsaicin intake is a reason for developing peptic ulcer. That Dr. Hamed's finding and hypothesis were correct was later confirmed by a huge number of experimental studies in nearly all parts of the world and directly proven by a group in Singapore who showed that capsaicin reduces the deleterious effects of aspirin on the human stomach (Yeoh et al. 1995).

## **Gatekeepers of science**

Professor Hamed's paper aptly points out the conceptual obstacles and prejudices which research contradicting common beliefs is facing. If this research is originating from areas that are considered scientifically underdeveloped in the West, the prejudices may transform into outright neglect. I ask myself the question whether Professor Hamed ever tried to publish his findings on the gastroprotective effect of capsaicin in full in an

international scientific journal and, if he did, what his experience was like. It was also very interesting to learn from him that even local academic staff at the University in Tripoli who had conducted research in the West had a low opinion about his unexpected research results. Unfortunately, geographical gradients of esteem are common within the scientific community, a fact that even divides Europe and America. Analyses of the acceptance/rejection rates of papers submitted to premier journals published in the US clearly show that Americans fare much better than Europeans, let alone scientists from other parts of the world.

The peer review process is held to be the holy grail of quality assurance in the scientific world, and the peers are considered to be the gatekeepers of science. Incidentally, the idea of the peer review seems to go back to Ishaq bin Ali al-Rahwi (854-931) as described in his work on "Ethics of the Physician". Ideally, the review by peers should be objective and impartial, but the reality does not always conform to this ideal. Both as an author and as a member of many editorial boards, I have become aware of some shortcomings of the current-day peer review process. For instance, the anonymity of the peer reviewers is rightly meant to protect the reviewers from endless discussions with authors and applicants but, on the other hand, provides a playground to let down competitors or treat them with arrogance. It is for these reasons that many journals and funding agencies offer the possibility to submit a negative list of reviewers, i.e., of reviewers who should be excluded. One possibility to protect authors from unfair reviews related to their geographical location would be a double-blind review process, i.e., both authors and reviewers are made anonymous one to each other. Being concerned about the shortcomings of the current-day peer review process, I have been considering to draft a codex of fair review that outlines the basic scientific and ethical criteria that should be universally met. The problem is: how can such a codex be enforced?

Another problem emanating from the current gate-keeping system is that research outside the mainstream of science is, even for "Westerners", increasingly difficult to publish in international journals of decent standard. This tendency towards a "self-perpetuation" of the system leads to prejudices against unusual ideas and findings contradicting the mainstream of thought. At the same time, it also leads to the rejection of "high risk research" although this approach is necessary to make a leap forward into new and unexplored scientific land. Another paradoxical manifestation of the contemporary scientific world is its exaggerated adherence to the principle that "the first takes it all". This overturns the very well-taken principle in the scientific method that a new finding should be confirmed by an independent laboratory before it is generally



accepted. Both the original report and its confirmation are equally important. The reality is that only the original report is published in a high rank journal whereas a confirmatory report is condemned to go to the low ranks.

### **The big divide: science and glamour**

It cannot be overemphasized that some of the basic principles of current-day science have their very roots in the Arab world. By placing greater emphasis on experimentation and empirical observations, Arab scientists were in fact the founders of the scientific method as we still know it today. Having said this, mention needs to be made of Ibn al-Haytham (Alhazen) as well as Abu Ali ibn Sina (Avicenna), the distant father of evidence-based medicine. Although Emperor Frederick II (1194-1250) was fascinated by Arab science, it was only in the post-Renaissance period that Europeans were taking up and building on these epochal achievements.

While the principles of the scientific method are still unquestioned, the scientific world in the West and, partly, in the Far East has adapted many facets of the show business, glamour superseding honesty and humility in the scientific investigation. The stars on the scene publish fast under the flashlights of “Nature”, “Science” and “Cell”, and there is a tendency towards formation of closed circles within the scientific community. These circumstances put scientists from scientifically under-developed countries and from countries with languages and cultural backgrounds different from the glamorous mainstream at a big disadvantage. A look at the history of modern science should tell us immediately that this is a big loss to the scientific world as well as to mankind.

### **The importance of cultural exchange and free flow of information**

There is no evidence that originality in research *per se* is geographically limited. Although I am not an anthropologist, I imagine that the kind of originality we may encounter varies geographically, depending on the educational and cultural backgrounds that are prevailing. However, I think that curiosity, the main driving force of research, is a universal property of mankind. Any culture that supports curiosity should be able to conduct original and relevant research. More importantly, as Professor Hamed’s paper details so aptly, local traditions and cultures harbour important inspirations for research, and I feel that mainstream

science and research are immensely enriched if different approaches from different cultural backgrounds are considered and integrated.

An aspect of the current scientific world that is not explicitly discussed in Professor Hamed's paper is access to scientific information that has become overwhelming and, at least in the biomedical disciplines, makes it impossible to keep track of developments outside one's own field of research. Access to scientific information is expensive, and I wonder how scientifically under-developed parts of the world are connected to the wealth of information that is published every day. If scientific findings would be published only in open access journals, everybody could immediately take advantage of this information. In other terms, any fruitful interscientific and intercultural exchange is in need of a free flow of information.

## Conclusion

Current-day science builds essentially on many achievements the Arab world has contributed in the past. I do wish that the conference in Paris will be successful and make an important contribution to foster intercultural exchange in a world of mutual respect, taking full advantage of the richness that all human cultures provide not only to science but also to mankind.

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## CHAPTER FOUR

# THE RENEWABLE MATERIAL RESOURCES: A MATERIAL BASE FOR THE ENDOGENOUS SUSTAINABLE DEVELOPMENT OF THE LOCAL COMMUNITIES

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### 1. Introduction

I am highly indebted, for all that I am presenting in this paper, to field work, through which I was able to interact with a wide spectrum of socio-cultural formations in local communities and to touch, by myself, their enormous potentialities. Thus, I was able to crystallize the concept of Endogenous Development.

During one of my field studies on the Northwestern Coast of Egypt, my guide was a Bedouin youth who was 17 years old at the time. He was illiterate, but he had an incredible knowledge about his region. He knew the geological formations very well, thus the depth on which he could find underground water, the methods of digging wells, as well as the names of the medicinal plants and their use in healing: it was a knowledge that my “academic” research colleague, a professor of agriculture, did not possess. This is what I call the *belonging knowledge*: the knowledge each one acquires as a member of his local community.

**Knowledge is a human product:** a product of human activity occurring in a definite socio-cultural context. The production of new knowledge is associated with the liberation of the oppressed and marginalized socio-cultural systems and the unleashing of their powers of creativity, thinking and imagination.

Neither the questionnaire, nor any other "objective" tool, are the real means for a researcher. **It is the *existential fabric of the researcher that is his means of research.*** In other words, **the researcher's *holistic existence***, with his awake senses, mind and soul, and his ability to identify with the researched community **and at the same time, his *surrender to the themes and/or priorities the community imposes on him.*** In this sense, field research constitutes a rare chance for the researcher to rediscover himself as a cultural being in the course of creative dialogue with the other: the researched community.

## 2. Definition of the renewable material resources

To come to a common background, let us define the renewable material resources (RMR). RMR are the resources of biological origin, sometimes called biomaterials [6]. The essential characteristic of these resources is that they *are, or were, alive*, i.e., a form of natural life and, hence, an ecosystem of its own right and a part of a larger ecosystem. This means that RMR carry, though in a miniature form, the genetic code of our "mother" nature and the cyclicity of life and death. A second important characteristic of these resources is that they are totally produced by using the renewable energy of the sun via the photosynthesis process [16]. Here we are talking about the **RMR of plant origin** which are actually a manifestation of the great process of renewal of natural structures (micro and macro). The **RMR of animal origin** are, or were, those forms of organic life that are relying totally or basically on materials produced by sun energy, i.e. RMR of plant origin.

The third important characteristic of RMR is that they are *renewable*. "Renewable" can be described as "being part of a relatively short ecosystem cycle", i.e. a cycle which acts on a human or biological time scale [29]. But we should stress here that renewability is just a potentiality: the *theoretical* potentiality to be renewed into exactly the same form in the same place [31]. Therefore, the actual renewal is conditional in the sense that it depends on (human) influences upon ecosystems. Over-exploitation will lead to exhaustion or extinction of RMR. One can also talk about partial renewal, i.e., renewal in terms of the carbon cycle, but not in terms of nutrient cycles [31]. Here again the renewal can be realized by the

human intervention, as in the case of use of fertilizers, the tissue culture, or genetic engineering! Therefore, it may be necessary to differentiate between “natural renewal” and “cultural renewal”. *Natural renewal* occurs within totally natural eco-cycles without leading to their disturbance, that is to say, it is preserving the resilience of the ecosystem [31], which is irretrievable [26]. Therefore, proceeding from the *precautionary principle* including a sound scepticism regarding the human intervention in nature, the natural renewal of RMR should be given a high priority as compared with cultural renewal. This gives a productive meaning to the concept of *natural capital* [26], which means that the preservation of the ecosystems is the guarantee of actual renewal of RMR, and hence their sustainable availability.

### 3. Classification of the renewable material resources

Fig. 1 [12], illustrates a simple classification of RMR. This figure demonstrates the wide variety of these resources worldwide. Here we have a wide variety in terms of species, as well as in the chemical composition and the physical and mechanical properties, depending on the specific ecological condition of each region in the world, the different practices of silvicultural activity, the age of the resource, etc. Besides, this figure reveals the dispersive character of distribution of these resources. This means that, apart from urban areas, there is no local community in Egypt, India, France or the U.S. without its own share of RMR. The combination of both characteristics, wide variety and dispersity of distribution, provides a strong base for sustainable development, because it shows that each local community can find its own authentic role in the process of sustainable development. This figure also reveals a priority area: the economic use of the secondary products of RMR. The *industrial market rationality* has placed (and continues to place) emphasis on the primary products (cash crops) of these resources [13]. This short-sighted vision has led to the neglect of use of most of the secondary products of these resources, leading to serious environmental effects, e.g. infestation by insects, burning – in the field – of agricultural crop residues, etc. But within the framework of sustainable development, this represents a challenge. Proceeding from the concept of whole crop use [11], a quite new vision for the economic use of RMR could be developed, making full use of the resource potential [31] of each component of the RMR.

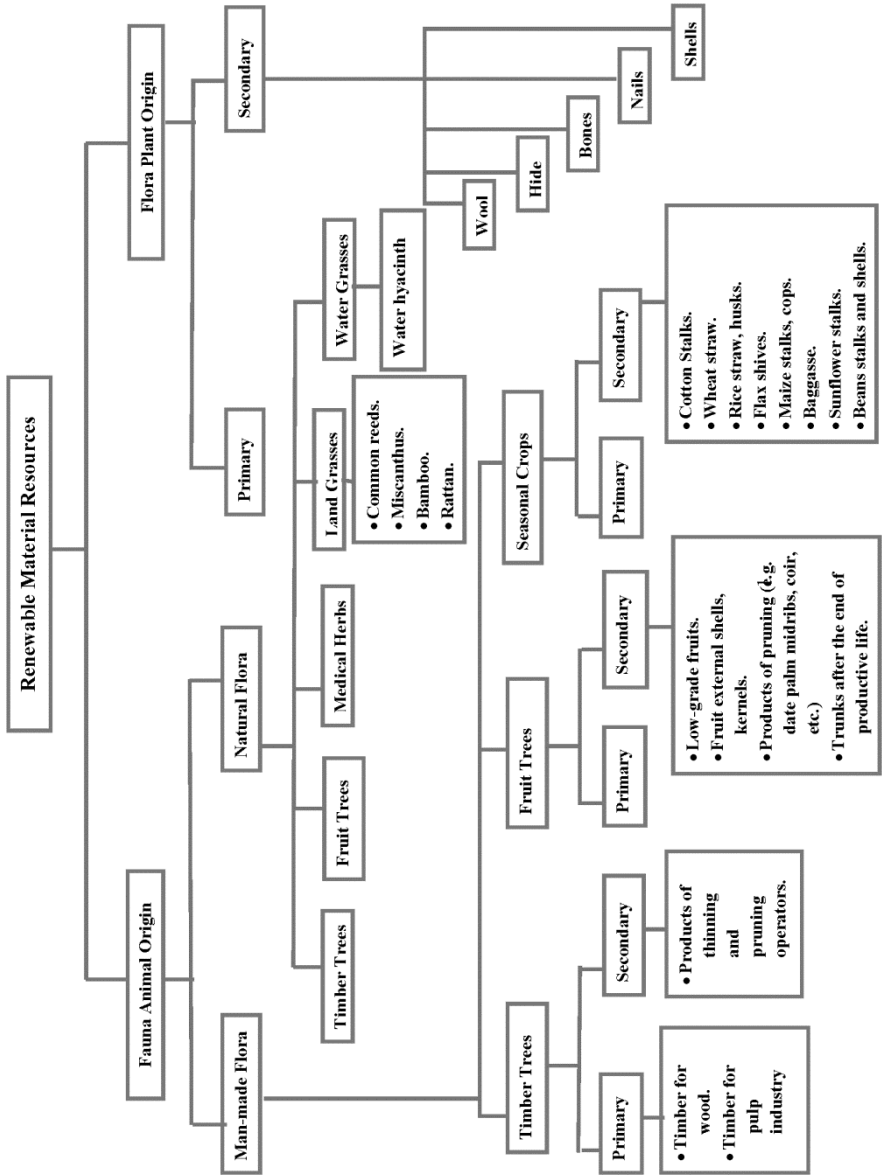


Fig. 1. A proposed simple classification of renewable material resources

#### 4. Sustainable development: a single concept and different approaches

Let us proceed with the definition of the *concept of sustainable development*, given by the World Commission on Environment and Development [29]. Sustainable development is defined as: "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

This concept has two dimensions: a geographical / national-cultural dimension referred to in the quoted definition by the words: "present generations", and a temporal dimension, as referred to in the same definition by "future generations". The first dimension, which we will call for simplicity the geographical, includes both the North and South. This dimension is usually not given due attention in literature and discussion on sustainable development (and sustainability in general), to the extent that it seems sometimes as if the industrialized countries are searching for the sustainability of their own standards of living. But if we take the geographical dimension into consideration, we will find that there are great differences in the respective contexts of the North and South. To start with, the issue of sustainability is not really a priority in many countries in the South, simply because the deterioration of the living conditions that we can observe here at present evokes feelings of apathy with regard to the future and to the future generations.

Concepts like sustainable development or sustainability are far from being operationalized. They are mostly confined to some intellectual spheres and discussions in formal institutions and donor organizations active in these countries of the South. This points to the fact that we need to develop different approaches or paths to sustainability in the North and South.

Proceeding from the vision of sustainable development, what is needed in the North is to change the currently prevailing consumption and production patterns. What is needed in the South is to stop their replication! If what is needed in the industrialized countries is to search for new innovation fronts or to develop innovation in the innovation process itself [28], what may be needed in the South is to restore self-confidence and the capability of innovation. **Let me mention here several ingredients of what may be called an approach to sustainability in the South.**

- *Confrontation with modern forms of cultural imperialism* that manage, via mass communication media, to propagate the

unsustainable lifestyles in the South which are currently prevailing in the industrialized countries.

- ***Recognition of the cultural specificity of different regions / societies.*** This is the first step that is necessary in order to tap the great and truly rich heritage of knowledge about the local resources and sustainable ways of their use that exists in each local community. Not only that, the recognition of cultural specificity will bring into action those cultural values that are conducive to sustainability in each culture.
- ***Building of endogenous scientific and technological capabilities*** that may help each region / society / culture to find its own modern version of sustainable development, relying on its own cultural traditions, technical heritage and resource endowment.
- ***Restructuring and strengthening of the social fabric of the local community***, perceived as a socio-cultural ecological system in its own right, and ***rebuilding the traditions of participative democracy within the local community***, and ***changing the image of the citizen*** from an isolated atom and a mere consumer and passive recipient of the exogenously imposed "fruits" of development to a member of his local community, who takes part in all the decisions that have to do with his personal and communal life.

## **5. The local community: a springboard for the restructuring of the civil society**

The local community, as a concept, is that semi-closed flexible socio-cultural subsystem that gives the opportunity to each individual for psycho-social interaction, within his capacity to communicate and interact, and to see and touch the product of his own interaction. **Thus, the cycle of the individual's own intentions resulting in actions leading to the perception of the results of actions keeps going on.** This gives a chance to ongoing self-correction and change of the self!

**From the economic perspective, the local community is a meeting area for local resources, production and consumption. The connection and interaction between these three circles on the local level may:**

- **Generate** new scientific and technological visions, harmonious with the local context.
- **Stimulate** the creation of new environmentally-friendly products and styles of life.



- **Provide** labor opportunities for the members of the local community: upstream and downwards: from the level of the new idea, system design to the development and manufacture of equipment and production.

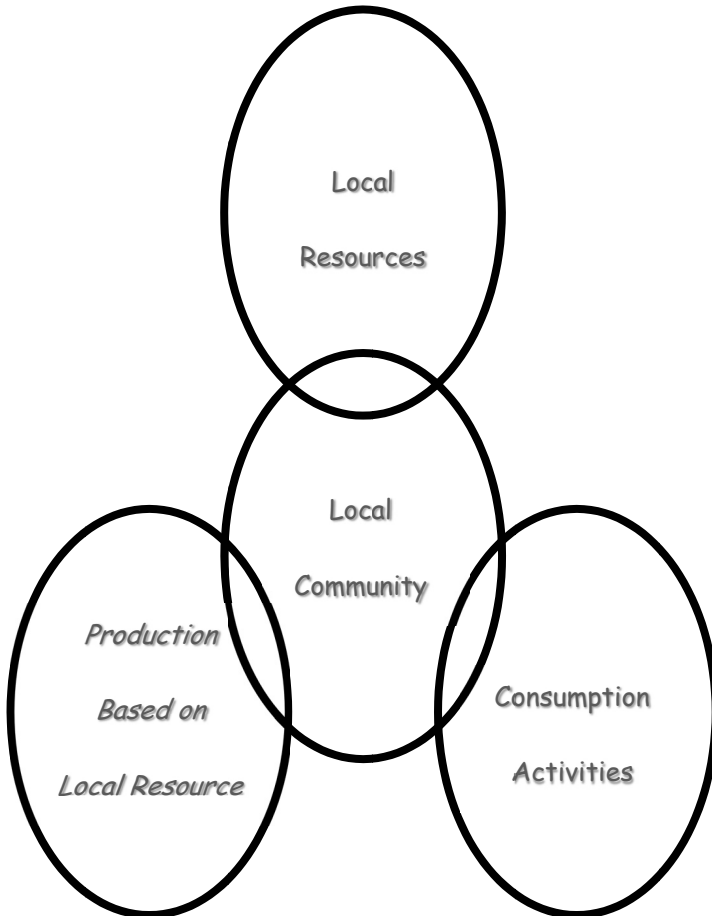


Fig. 1b: The local community: a meeting area for local resources, production and consumption

### **What are the Development Potentialities of the Local Community?**

1 - *Specific values expressing the mode of adaptation to the ecosystem and to what the local community perceives as "the external world"*. These values, or psychological setup, provide the basis for psychological stability and security and make life tolerable, no matter how the living conditions seemed harsh!

2. *Traditional networks of social relations (e.g. extended families, tribes, etc.) supporting collectivity in life and work and exerting considerable social control on the behavior of individuals*. These networks could support many economic activities in their initial stage before reaching the borderline of economic feasibility and profitability.

3. *A technical heritage, product of thousands of years and associated with the satisfaction of basic needs* (e.g. food, clothes, shelter, energy, communication, curing, transportation, defense, etc.). This heritage could be of contemporary use in the satisfaction of some basic needs. In addition, this heritage represents a code – like the genetic code – of adaptation to the environment. Being of high cultural expressiveness, this heritage may act as a software inspiring culturally specific trends of thought and imagination.

4. *The locally available resources*, especially the material resources (renewable and non-renewable). The different cultures of the world flourished in company with different material resources (in Asia: bamboo, rattan and rice, in Egypt, papyrus, lotus, alabaster, granite and limestone, etc.).

**On the micro level, beginning development with the local material resources means that you are not beginning from zero: you are building on the prevalent cultural repertoire that people have!**

## **6. The endogenous development**

**The endogenous development** proceeds from a vision of **the local community as a living entity** possessing its own development potentials and having a distinct identity. In endogenous development, the focus is not on the provision or improvement of factors of production in the economic sense, but rather on **helping the local community to rejuvenate its culture, to express its own values – and to find new forms of expressing these values**. The endogenous development, thus, unleashes the potential energies of the local community and its endogenous capabilities for *rejuvenation* and *embetterment* and creates the conditions for the continuation of these transformations.

### **What Does the Endogenous Development Imply?**

1. We need training to view **diversity** (due to ecological conditions, historical experiences and socio-cultural formations) as normal, and similarity of local communities as the exception. We need to relinquish the paved route of standardization and **accept the challenge of diversity of local communities**, which is, in itself, a source of creativity and enrichment in the development practices.

2. There is a need to **valorize and accept some elements of the traditional ways of life** in the local communities. We can explore the potentialities of development and innovation in such elements (in design, processing techniques, etc.). This will open the way for the utilization of **the ecological uniqueness** (elements of flora, fauna and geological formations, specific to each region) **as a competitive advantage in the economic sense**.

3. **No** to the ready-made parachute-dropped and exogenously imposed solutions (e.g. turn-key projects) and **Yes** to the solutions emerging as an idea from the local context, implemented with the participation of the local populace, and getting reweven in application *in the local context*.

4. **We need a new concept of planning: planning that begins from below upward:** a planning concept that cares to give a major role to the participation of the populace in development. **This may lead to a new vision of modernity that is relying on local innovation and self-reliance.**

5. **There is no available or ready-made data base for the endogenous development** of local communities. The data available on a sectoral basis (agriculture, industry, etc.) are inappropriate. Each local community should establish its own data base, sticking to a holistic view of the potentialities of development, intertwined together (e.g. history, people's skills and capabilities, resource endowment, etc.).

## **7. New concepts and discoveries**

### **7.1. The exploratory experiment (EE)**

It is a limited experiment, well-designed to explore the feasibility of manufacturing a new product or to open a new realm of utilization of a raw material. You can do it where and when feasible! **Via the EE, you could transform your imagination and thinking of reality with the least expenditure in terms of time and resources!**

## 7.2. Do not think too much: think and experiment

The quick transfer from thinking to experimentation – and the feedback that occurs – results in jumps with respect to the crystallization of new thoughts, and it speeds up the process of innovation.

## 7.3. D & R and not R & D

First find an application (product or service) and explore its feasibility and marketability. When found feasible, then do the research to find out the optimum conditions of the manufacturing process. In our experience, the spearhead of development was the emergence of the idea of a new product. This model is *more appropriate for many countries in the South* that are lacking decent research financing.

## 7.4. Rediscovery of local material resources

The objective here is to explore new bridges between these resources and contemporaneity, aiming to "marry" these resources to contemporary needs here and now. **Thus, these resources represent a renewable challenge for the successive generations:** each should develop its own edition of use of these resources! This may provide an alternative to the blind imitation and importation of ready-made solutions and products!

## 7.5. Poverty does not grow naturally like trees

It is a product/consequence of marginalization of people and of neglect of local resources. The struggle with poverty should begin upstream: this means **forgetting for a while the poorness of the poor and treating him/her as a partner with equal rights**, exploring his/her potential capabilities, empowering him/her and helping him/her to discover his/her potentialities.

## 7.6. Begin with the easier and possible here and now!

How can I/we, within the ceiling of endogenous capabilities and limits of the context, design / choose the size of the challenge which strengthens me/us, thus leading to the design / choice of a new and bigger challenge? **Find your own challenge that you can manage!** For example, we found that in many cases beginning with handicrafts before moving on to mechanical and automatic production systems was appropriate!

### 7.7. Even with endogenous development

Interventions and experts from outside are needed: to show people new potentialities and opportunities, inspire them to think and imagine, and retrieve their self-confidence. **But experts should work as a catalyst with a low tone and never as stars!** The real success of their effort is the **creation of local stars and heroes**, who may show the way to others and act as ideals among the local populace.

### 7.8. Let work talk and not words

In order to convince people to participate, **work** and **network** and network the networks! But networking with others, in order to be successful and sustainable, should be built on the **win / win rule**.

Just take the first step forward and show people that a new possibility is emerging, and they will be with you! Say to them: let us own this success *together!* Let us be partners!

## 8. Examples of projects and products, based on renewable material resources

1. Our intention in these projects was the dissemination of **small-scale industries** (SSIs) in local communities relying on their local renewable material resources. This means that development begins with what people have at their hands, and *have more of* (than they happen to have of other resources) – and with what they *know about* so much *better*. Here SSI are regarded: not just as a tool for *investment* or for provision of *income generation opportunities*, but **mainly as a tool for the rejuvenation of the people's relation with their local resources** and for the stimulation of imagination and thinking and thus technological innovation on the local level.

2. **We began these projects with a layman's knowledge of the material resources.** We knew nothing before about, say, palm midribs, cotton stalks and products of the pruning of fruit trees. This indicates the wide applicability of the methodology behind these projects.

3. We have discovered that **the problem of the materials we worked on is mainly that they are procured among the poor**, no matter whether they were producers (peasants), artisans or consumers. With our technical intervention, we have been able to open the social realm of procurement of these materials in order to include higher social strata of the society.



Fig. 1c: The triangle of technological innovation

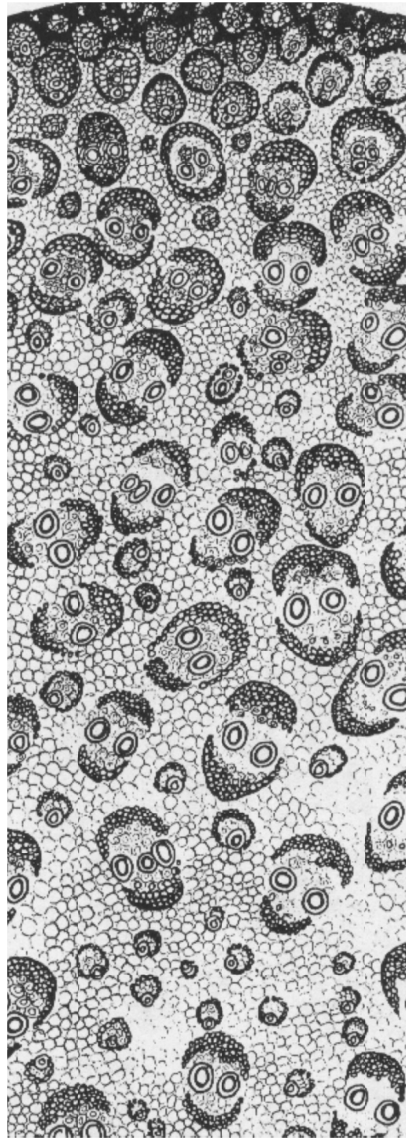
#### 4. Dialoguing with the local community has resulted in new technical innovations

4.1 The process of manual processing of palm midribs (PM) in crates manufacture was the basis of development of a **new process: the skinning process of PM** which is much safer (no need for rotating disc saws) for work in villages (households) and at the same time, environmentally-friendly (no sawdust or noise and much less power consumption). This process could be utilized in the production of PM strips in houses, as well as thin strands for the reinforcement of polymers as a substitute for glass fibers.

4.2 The manual combing of flax was the springboard for developing new techniques for the separation of the branches, bolls and leaves from cotton stalks, in order to use the stalk in the manufacture of lumber-like products.

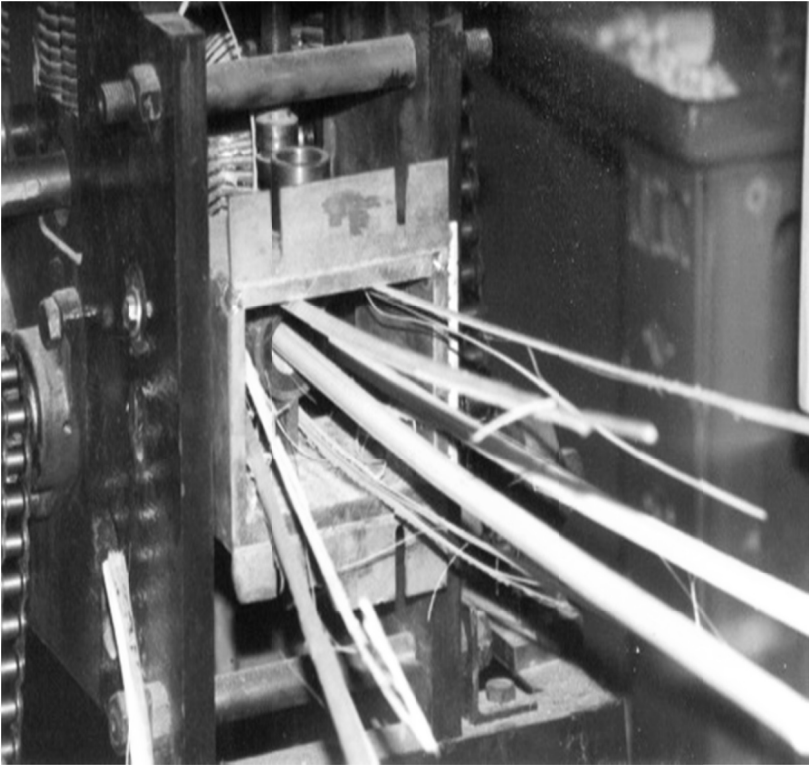


Crate artisan

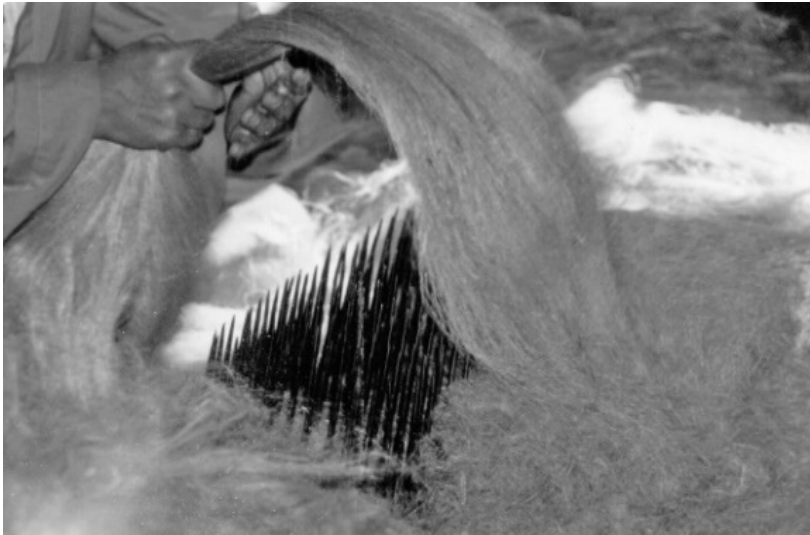


PM Anatomical Structure





Skinning Machine



Manual combing of flax



Separation of branches, bolls and leaves from cotton stalks

4.3 The process of flax retting has been successfully applied for the separation of the outer layer of cotton stalks that is necessary for their use in the manufacture of lumber-like products *as a substitute for imported wood*.

## 8.1 Projects on Palm Midribs

### 8.1.1 Rationale

Egypt (like most Arab countries) is located in an arid zone that is very poor in forest coverage. The percentage of the area covered with forests, in relation to the overall area, ranges between 0.002% for Egypt, 0.3% for Libya, 0.7% for Saudi Arabia, 3.5% for Syria, 4.5% for Tunisia and 22.3% for Sudan [27]. This has placed Egypt and the whole region on top of the countries that are relying on the importation of wood and wood products for the satisfaction of their need. But this situation is unsustainable! Consumer associations and environmental movements like *Milieudéfensie*, *Natuur & Milieu* and *Greenpeace* [1] have been able to exert great pressure in favor of the preservation of forests. This has led to the reduction of the rate of lumbering (harvesting of trees), leading to less availability of wood in the international markets and the increase of the price of wood [16]. It is estimated that the cost of importation of wood for Egypt was 1.5 billion US\$ quite recently. This figure will increase in the future, if (and when) the wood-producing countries will pursue the objective of sustainable harvesting [19]. Thus, there exists a harsh necessity to find local substitutes for wood: not only for the satisfaction of the local basic need for furniture, especially of the poor in the villages, but also in order to stop the irrational environmentally-unfriendly behavior of importation of wood and its transportation from overseas, thus mainly from the U.S., Canada, Russia and Finland to Egypt and the other Arabian countries! The conducted studies have shown the high *availability potential* of palm midribs that are a product of the seasonal pruning of palms [13]. The real beginning of enthusiasm for DPLM (Date Palm Leaves' Midribs) was the field study in El-Arish [8] that was revealing the use of DPLM in roofing. The endurance of DPLM for centuries when used in the production of roofs (Fig. 2) served as a natural experiment emphasizing the distinguished natural and mechanical properties of DPLM as a material. The R&D and world-recognized standard tests (ASTMD-143/8), conducted by Ain Shams University, have proven that DPLM enjoy natural, mechanical and machinability properties close to those ascertained for species of soft and hard woods that are usually imported

[9]. Besides, the industrial use of DPLM is a very effective measure to stimulate regular pruning of palms and hence to overcome the dangers of fire and infestation by insects in palm gardens resulting from the neglect of the pruning of palms (1).

1 Wood Industry Chamber, 2014.

(1) The drastic shift in the way of life in many rural areas in Egypt, as well as in most of the Arab Countries, has led to the decay of many traditional uses of the palm midrib (e.g. in roofing, door making, fencing, crate making, etc.) and hence the neglect of palm pruning.



Fig. 2. A mat of palm midribs in the roof of an Araishi house [8].

### **8.1.2 Blockboards from palm midribs**

Due to its full reliance on imported spruce wood, the blockboard industry in Egypt is in a critical situation. Therefore, it has been decided to direct R&D efforts to the use of palm midribs as a substitute for spruce in the core layer of the blockboard. The research results have proved that the palm midrib-core blockboard enjoys physical and mechanical properties comparable to (and in several cases superior to) those for spruce-core blockboard [2], Appendix (I). Therefore, machines have been designed and manufactured for the conversion of palm midribs into strips with a uniform cross-section, for the core layer. This new product has been

successfully marketed and used in school furniture in community schools, established all over Upper Egypt by the UNICEF (Appendix II).

### **8.1.3 Arabesque from palm midribs**

The Arabesque (Mashrabiah) handicrafts are a part of our cultural heritage. The Arabesque items are being used in furniture, windows, and partitions (Fig. 3). The drastic increase in the price of imported beechwood, usually used for Arabesque, has led to the shrinkage of demand for Arabesque handicrafts products. Therefore, it was thought that the replacement of beechwood by the cheap locally available palm midribs may open the way for the revival of Arabesque handicrafts, especially in rural areas. The Centre for Development of Small-Scale Industries has launched a project on July 2nd, 1995 in the Dakhla oases in the New Valley governorate, destined to disseminate Arabesque handicrafts using palm midribs as a raw material. A training center has been established to train the beneficiaries (Fig. 4), who obtained their lathes on a loan basis, in order to produce at home. The project has had a great success by turning the poor, especially women, into autonomous producers and entrepreneurs and it has managed to transform the idea of rational use of *tree pruning products* as a substitute for imported wood into a reality. The project opens up a great potentiality for the dissemination of a new culture of sustainable use of renewable material resources in rural and desert communities in the whole region.

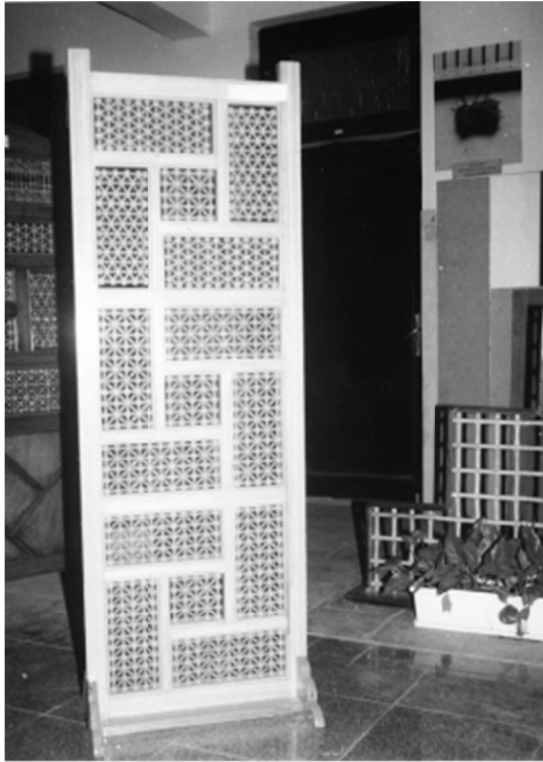


Fig. 3. A partition with Arabesque from palm midribs.



Fig. 4. Training of beneficiaries in El Dakhla oases

#### **8.1.4 Particleboards from palm midribs**

It has been proven that the efficiency of utilization of palm midribs in Arabesque and blockboards does not exceed 40%. Therefore, research has been conducted on how to use these midrib residues in particleboard manufacture. The results have proven that particleboards, manufactured from palm midribs, enjoy physical and mechanical properties satisfying the Egyptian particleboard standard 906/1991 [9]. This opens the way for development of a particleboard industry, complementary to Arabesque or blockboard industries, in order to satisfy the objective of integrated use of the palm midribs.

#### **8.1.5 A lumber-like product from palm midrib**

As a response to the acute shortage and the high prices of wood in Egypt, research has been conducted to investigate the possibility of the manufacture of a local substitute for solid wood that could be made from palm midribs. The research results indicate that palm midrib blocks enjoy values of modulus of rupture (MOR) and other mechanical properties similar to those of red pine and spruce. This opens a great potentiality for use of palm midribs to manufacture products that would partially

substitute imported solid wood in Egypt and the whole Arab region. This research [30] has been awarded the Euromate-97 conference prize for the best poster, 21-23 April 1997, Maastricht (Appendix III).

### 8.1.6 A super strong material from the palm midrib

Analysis of the anatomical structure of the palm midrib [20] has shown that the outer layer differs from the inner part of the midrib by a higher density and smaller diameter of the fibro-vascular bundles. This suggests that this outer layer may have better mechanical properties, as compared with the average properties of the midrib. Besides, this layer constitutes an unused residue of the palm midrib blockboard industry. Thus, research has been conducted to determine the tensile strength of the outer 1.25 mm layer of the midrib. The research results [15] (see Table 1) clearly indicate that the outer layer of the midrib enjoys a tensile strength ( $\sim 25 \text{ kg/mm}^2$ ) comparable with that of commercial steel, whereas its specific tensile strength is 4.3 times higher than steel. This indicates that the palm midrib outer layer is a super strong material that could find wide applications in polymer composites.

**Table 1. The values of tensile strength and specific tensile strength for DPLM outer layer, compared with the inner layer, several wood species and steel [15].**

Material	Tensile strength ( $\text{N/mm}^2$ )	Specific tensile strength ( $\text{N/mm}^2$ ) / ( $\text{g/cm}^3$ )
Outer layer	248	196
Inner layer	70	86
European red pine	78	142
Beech	97	140
Steel 37	367	46

### 8.1.7 Space trusses from palm midribs

During the earthquake which has struck Egypt in 1992, most of the casualties in the poor villages of Upper Egypt were due to the collapse of the ceiling. In these villages, people usually use the technique of the bearing walls in the construction of their houses. The ceiling is traditionally made from mats of palm midribs, supported on beams of wood, or tree trunks and covered by a mud layer. Therefore, it was decided



to conduct research on the use of palm midribs in the design of space trusses for low-cost roofing. Samples of palm midrib trusses have been designed (Fig. 5) and manufactured. A model for the calculation of the bearing load was developed and verified by experimental tests [17].

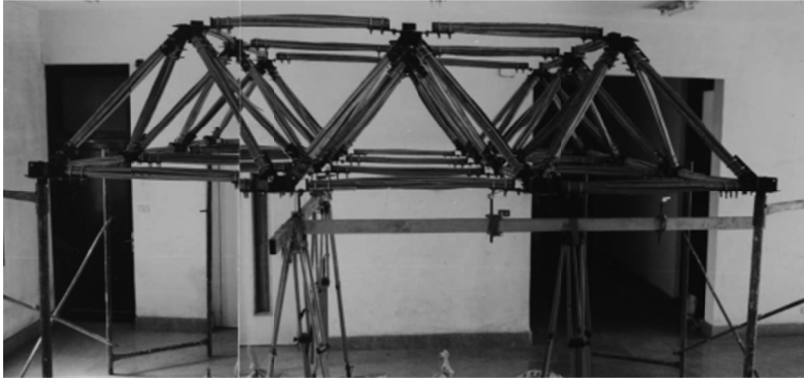


Fig. 5. A space truss from palm midribs [18]

### **8.1.8 Parquet from palm midribs**

Parquet pieces are traditionally manufactured in Egypt from imported hardwoods like, for example, oak and beech, the prices of which are soaring with time. Therefore, research has been conducted to impregnate DPLM with different polymers with the purpose of the improvement of the physical and mechanical properties, so that DPLM could satisfy the technical requirement associated with its use in parquet as a substitute for oak and beech. The research findings [7] have shown that the impregnation of DPLM with different polymers has resulted in a significant increase of abrasion resistance and water repellency characteristics. This opens the potentiality of use of DPLM in parquet and flooring in general.

## **8.2 Use of Cotton Stalks for the Manufacture of Particleboards**

### **8.2.1 Rationale**

Cotton is one of the main crops being cultivated on about 420,000 ha in Egypt [11]. Therefore, an annual amount of about 1.6 million tons of cotton stalks are being burned after cotton collection to get rid of the pink cotton bollworm residing in the unopened bolls. Besides, 300 million L.E.

are spent for the purchase of pesticides every year in order to combat these insects. In addition, kerosene is added to the irrigation water to kill the worm. Nevertheless, Egypt loses on average about 20% of its cotton fiber crop due to the destructive effect of this insect [11]. All the aforementioned practices are very environmentally-unfriendly and uneconomic. It is suggested that the industrial use of cotton stalks is both an environmentally-friendly and economically rational alternative to the combat as waged at present against the pink worm, especially because Egypt suffers an acute shortage of the lignocellulosic material supply.

The particleboard industry in most of the industrialized countries relies on the residues of the sawmills and wood-working industry as a source of supply of raw material. In Egypt, the alternative raw material supply is seen now in the agricultural residues, such as cotton stalks. One of the large particleboard companies in Egypt used the casuarina trunks as a raw material for particleboards. This proved to be unsustainable, because the rate of renewal of casuarina is very slow. As a result, the quantities of available casuarina stems decreased and their price went up. Therefore, it has been decided to run a research project on the substitution of casuarina by the cheaper and widely available cotton stalks.

The first phase of the research project has been conducted under laboratory conditions. This phase has proved the possibility of the manufacture of one-layer and three-layer particleboards from cotton stalks that would be satisfying the requirements of the Egyptian Standard No. 906/1991 for particleboards [11]. Besides, it was possible during this phase to determine the optimum process parameters of the manufacture of one-layer and three-layer particleboards from cotton stalks.

### **8.2.2 Methodology and procedure**

For the conduction of the pilot phase of the research project, a methodology has been worked out to guarantee:

- The shift of as many steps of the preparation of the raw material as would be possible, to sites near the location of cotton plantations, in order to achieve more justice by distributing the benefits of industry between rural and urban areas and also in order to make good use of the advantageous economic parameters of the rural areas (lower rental rates of land for storage and air drying of cotton stalks, cheaper wages, etc.).
- The use to the maximum, and with the least modifications, of available equipment in the Egyptian village and this preferably

during the dead season of their operation, which has social and economic advantages.

- The maximum participation of members of the local community in the processes of preparation of the cotton stalks, either in the brainstorming meetings of the project, in operation of the equipment, or as subcontractors for the supervision of the whole process of preparation of cotton stalks.

Fig. 5 gives an idea of the procedure used for the preparation of cotton stalks in the fields in El-Dakahlia governorate [14]. The cotton stalks were transported to a collection site not far from cotton plantations. The cotton stalks were stacked up to 3 meters in height, leaving corridors for transportation. Air-drying was very successful, taking about 30 days to decrease the moisture content from 140% to 20% [14]. Threshing was very successfully conducted using the traditional old wheat threshers. Thus, cotton stalks were converted into bales with standard dimensions and bulk density  $\sim 0.2$  ton/m<sup>3</sup>, in order to be then transported to the factory.

### **8.2.3 Evaluation of the project results**

#### **Technical appraisal.**

The particleboard factory has been operated by using 326 tons (air-dry weight) of cotton stalks for the production of three-layer particleboards, laminated by melamine-impregnated paper. Table 2 illustrates the results of the evaluation of the main mechanical and physical properties of the factory product using different blends of casuarina and cotton stalks. It is clear from this table that the 100% cotton stalks boards satisfy the requirements of the Egyptian standard No. 906/1991 for particleboards [14].

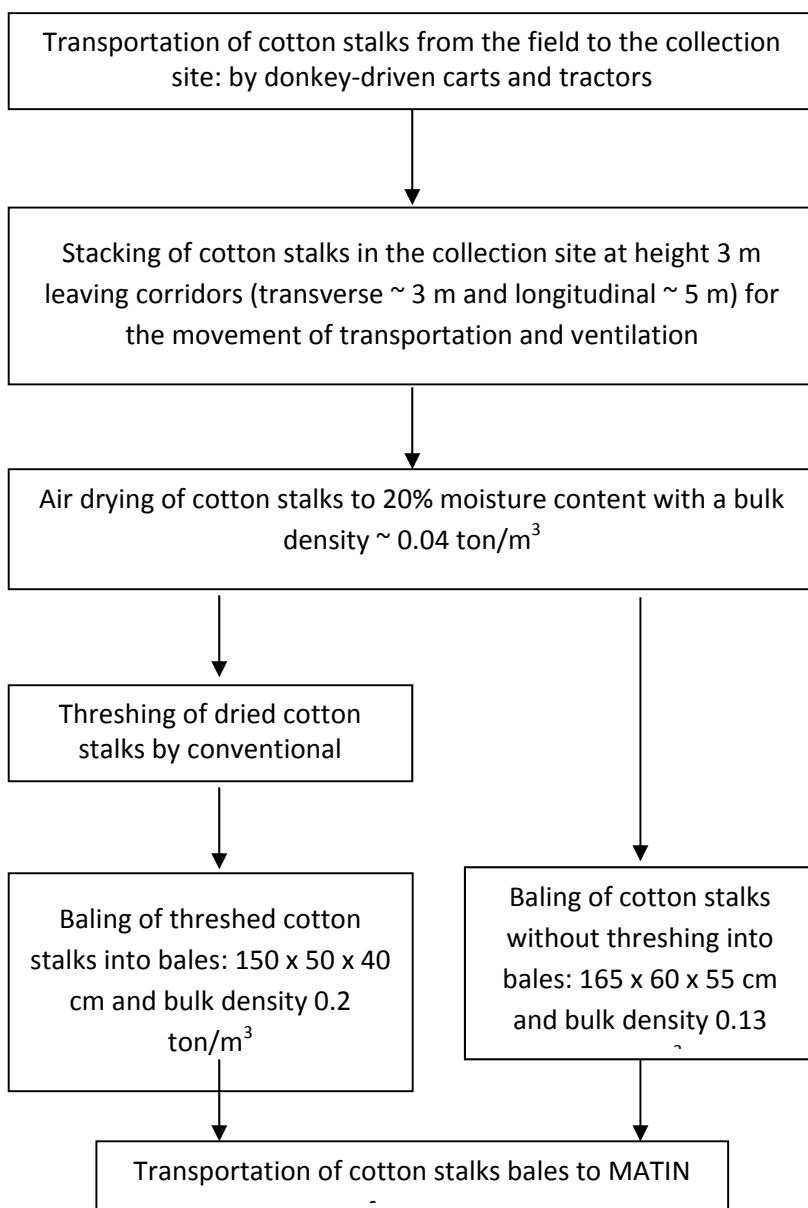


Fig. 6 Procedure of preparation of cotton stalks in the field [14]

**Economic appraisal.**

In order to evaluate the economic feasibility of the use of cotton stalks as a substitute for casuarina in particleboard production, the criterion of cost of one ton of particles (oven dry with resin on) [18] has been used. This criterion, excluding all common economic details of calculation, could measure the economic significance of introducing a new material in manufacture. Therefore, it was found that the net economic gain per ton, realized by the substitution of casuarina by cotton stalks, is equal to 63 L.E. [14]. In addition, the energy cost needed for drying of cotton stalks is much less, leading to the saving of about 8 tons/day of heavy fuel oil (one ton of heavy oil costs about 800 L.E.) In addition, the preparation of cotton stalks needs much cheaper equipment, less costly in operation in terms of tools and energy, than casuarina.

**8.3 Use of Products of Pruning and Renewal of Fruit Trees as a Substitute for Imported Wood****8.3.1 Rationale**

Egypt (like the entire Arab region) is famous for the growing of fruit trees of all kinds, such as: mulberry, guava, mango, olive, apricot, etc. These trees should be regularly pruned according to the horticultural rules followed with regard to each of them. There are several practices of pruning, associated with fruit trees. The products of pruning are usually treated as waste and are burned directly in the field. After the end of the useful or productive life of a tree, either due to its by now low productivity, low product quality, or due to infestation by insects, the wooden material of these trees is usually sold to merchants of charcoal in order to use them in charcoal making. These are very environmentally-unfriendly and economically irrational practices, because Egypt and the whole Arab region spend a lot of their hard currency on the importation of wood. Therefore, it has been suggested to investigate the possibility of use of the products of pruning and renewal of fruit trees in handicraft, woodworking and furniture industries. But what served as the spark of enthusiasm for this research project? It was the use of products of pruning of guava trees in the manufacture of candles by the young female trainees in the Arabesque project in the Dakhla oases.

Raw material	Thickness, mm	Mech. & Phys. Properties										UF %	Wax %
		Density g/cm <sup>3</sup>	MOR, N/mm <sup>2</sup>	IB, N/mm <sub>2</sub>	MC %	FC N/mm <sup>2</sup>	TS2 %	Water abs 2 hr					
Casuarina 100%	16	0.776	16.3	0.64	7.3	1.44	6.1	26.8			11.6		
Casuarina: CS 85: 15	16	0.769	16.25	0.7	6.5	1.65	3.9	23.5					
Casuarina: CS 50: 50	16	0.686	14.68	0.41	6.3	1.39					11.0	0.15	
Cotton stalk 100%	16	0.761	16.78	0.4	6.6	1.1	8.6	17.1					
Casuarina 100%	10	0.859	21.72	1.09	3.5	1.56	2.9				13.5	0.5	
Casuarina: CS 50: 50	10	0.789	13.7	0.7	5	0.97	3.6	27			13.3	1.0	
Cotton Stalks 100%	10	0.697	12.9	0.5	5.3	1.06	10.7	55.3			13.3	1.0	
Egyptian Standard 906/1991 for board thickness 16 mm		0.7	14	0.31	6-13	1.2	12						

### 8.3.2 Field research.

Field research was conducted to evaluate the quantity of products of pruning of the following fruit trees:

- Mulberry
- Mango
- Pear
- Plum
- Guava
- Olive
- Lemon & orange
- Apricot.

Besides, whole parts of trunks of the aforementioned trees were obtained from the charcoal merchants to conduct the experimental work needed.

### 8.3.3 Experimentation and laboratory tests

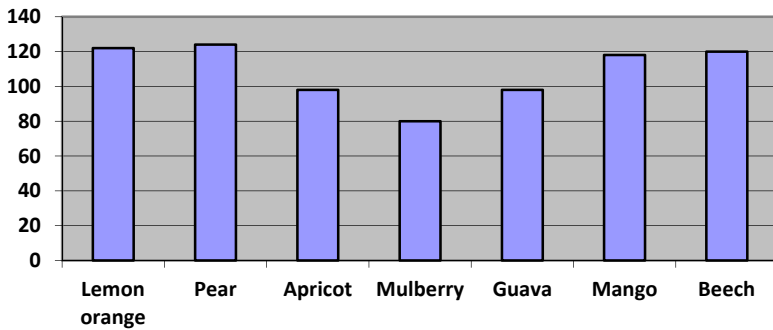
Samples of the aforementioned trees were then subject to known carpentry work, such as saw cutting, molding, carving, sanding and painting. In several cases (mango and apricot), rotary peeling was conducted on whole pieces of the tree trunk to obtain a 2 mm veneer. Production experiments were conducted to manufacture final products from the aforementioned materials. Besides, laboratory tests were conducted to determine the modulus of rupture, modulus of elasticity, maximum compressive strength and hardness. As a datum for comparison, the same tests were conducted on samples from beech wood.

### 8.3.4 Results and discussion.

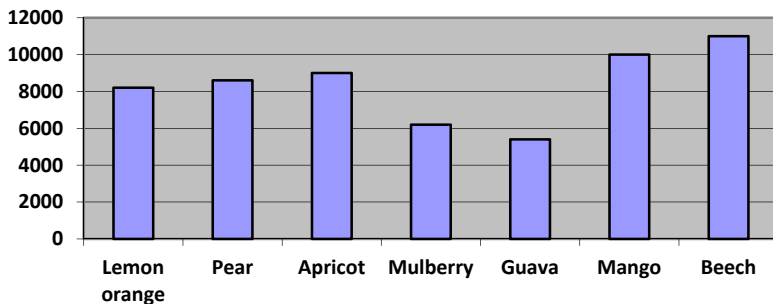
Fig. 7 illustrates a *comparison* between several mechanical properties of lemon, orange, pear, apricot, mulberry, guava and mango wood *with beech wood*. It is clear from this figure that as far as the modulus of rupture is concerned, all the species mentioned have values very adjacent to that ascertained for beech. Lemon and orange, as well as pear are higher than beech in bending strength. As far as the modulus of elasticity is concerned, the mango has the highest value (10031.4 N/mm<sup>2</sup>), approaching that for beech (11097.4 N/mm<sup>2</sup>). The lowest in elasticity is guava (5433 N/mm<sup>2</sup>). Concerning the maximum compressive strength,

apricot is the highest, followed by mango, pear and lemon & orange: all higher than beech. The lowest in maximum compressive strength is guava, followed by mulberry. As far as the hardness is concerned, the apricot is the highest, 1.7 times higher than the hardness of beech, followed by lemon and orange, 1.6 times higher, mango, 1.4 and pear, also 1.4 times higher. It is clear from the aforementioned that all the species tested are higher in hardness than beech.

### Modulus of Rupture in Bending, N/mm<sup>2</sup>

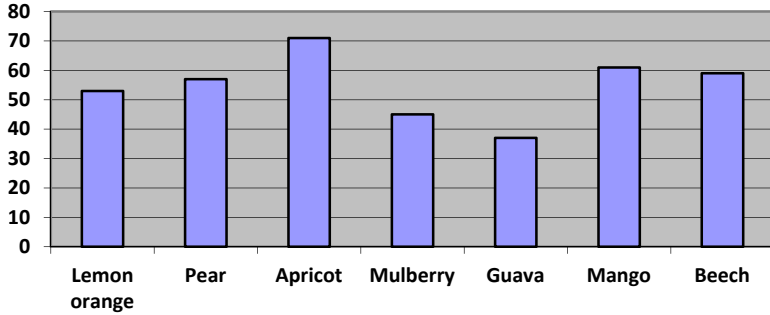


### Modulus of Elasticity in Bending, N/mm<sup>2</sup>





### Compressive Strength, N/mm<sup>2</sup>



### Hardness, N

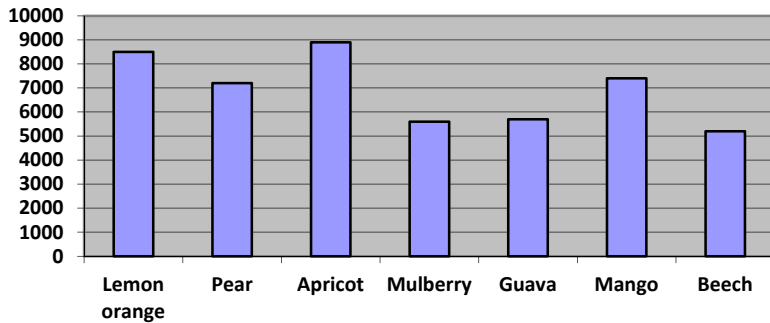


Fig. 7 Comparison between mechanical properties of test specimens, made from products of pruning and renewal of fruit trees with beech wood, taken as a datum for comparison. Fig. 7 consists of 4 images: Modulus of Rupture in Bending, N/mm<sup>2</sup>; Modulus of Elasticity in Bending, N/mm<sup>2</sup>; Compressive Strength, N/mm<sup>2</sup>; Hardness, N

## **9. The renewable material resources: a new challenge for engineers**

### **9.1 Introduction**

Throughout the course of man's history, the renewable material resources played a pivotal role in man's life. Different cultures of the world evolved hand in hand with certain elements of the flora in each region. For example, papyrus was pivotal in ancient Egypt. It was used not only for food and for the production of writing paper, but also for the manufacture of sailing ships or sailboats. Columns of the ancient temples in Egypt were made in the form of bundles of papyrus stems, symbolizing the significance of papyrus in the life of ancient Egypt. In Asia, bamboo, rattan and rice were essential ingredients of the way of life there. In Europe, wood played a dominant role in all the walks of life. Before the Industrial Revolution, factories were built next to dams on rivers. Huge wooden wheels were used to transfer the motive power of water, collected behind the dams, to machines in these factories. It wasn't until the First and then Second Industrial Revolutions that a drastic shift occurred in the dependence of man on RMR [12]. The shift to steam power, then electricity, the invention of the internal combustion engine and the revolution in industrial chemistry and in steel manufacture were the main factors behind the shift to reliance on nonRMR [12]. Still, around 1900, the natural materials were practically the only alternative for the production of all types of objects and technical products. Textiles, rope, canvas and paper were manufactured from domestic natural fibers such as flax, hemp, etc. [1]. The rise to predominance of synthetic organic materials and of synthetic fibers started in the 1920s [1].

Let me first point to the fact that the shift, from RMR to non-RMR, gave quite a different "image" of the material and, hence, the product. A material from RMR expresses to some extent the identity of the natural resource. Sometimes it even reveals a part of the history of the genesis of the resource, like the annual rings of trees in wood and the fibrovascular bundles in bamboo, and transmits to you the message of finiteness of resources. This, I think, may have an influence on the behavior of the user/consumer of the product, I mean the value of frugality. In contrast, the image of a material from a non-RMR, like nylon or plastic, is abstract. It does not have any imprint of nature. Therefore, a material from non-RMR transmits to you the message of infiniteness of the resource and, hence, the value of limitless consumption.

But the shift from RMR to non-RMR has had deeper implications. It was accompanied by a shift of many productive activities from the South to the North and, in both South and North, from rural to urban areas, where new non-RMR industries were destined to flourish. The past 200 years with their model of industrialization relying on the exploitation of cheap raw materials without paying for the ecological consequences (ecological *rucksack*<sup>1</sup>) of extraction of resources, together with the growth of labor productivity by 50 to 100 times [3], has created a state of abundance of material goods and caused a tremendous rush in the pace of consumption.

The present prevailing model of consumption is not a clear expression of the satisfaction of *basic needs*. From the behavioral point of view, it is rather a process of conversion of people to a desire *to purchase and possess*, as an alternative to self-expression and innovation – thus in art and home production. Today, in the context of the prevailing (dominant) model, you can – “in theory” or according to the prevailing *zeitgeist* – buy and possess beauty, art and any product, in a ready-made form. Consumption for consumption is intended to fill the gaps in your life, leaving little for your free choice [3], for your search for the meaning of life, and or for self-realization, and even less, for togetherness and communication with others<sup>2</sup>. At present, the curricula in science and engineering classes deal mainly with steel and concrete and to a lesser extent with other metals, ceramics, plastics, and glass. There is a clear negligence of renewable material resources in these curricula, which means that the renewable material resources are not considered materials in the engineering sense. In engineering, a material is usually defined as a substance with consistent, uniform, continuous, predictable and reproducible properties to the extent that it can be relied upon in the satisfaction of certain required performance criteria [12]. The difference, for example, between a steel I-beam and a wooden log is that you can accurately predict the performance of the former under a certain load, whereas you couldn't in case of the latter. This example well synthesizes the engineering look to a material but doesn't explain *what is engineering?* Engineering is the process of transformation – via imaginative thinking and design process and then manufacturing processes – of a material from its state as an isentropic material extracted from nature to a, more or less, isotropic material having reliable and predictable performance. The

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<sup>1</sup> The total amount of natural materials disturbed and utilized in order to make a product available as a service delivery machine [3].

<sup>2</sup> The proportion of man-man communication in human communication in the West has dropped from 90% to 10% in 50 years [21].

stainless steel wasn't found in its present form in nature; it needed a long history of engineering effort to transform iron oxide as extracted from nature to stainless steel.

Let us now come to the main question: why were the renewable material resources less engineered until now, as compared, for example, with steel? If we categorize materials into two categories: *price-driven* (i.e., those materials the cost of which is dictated by the market), and *performance-driven* (i.e., those materials, for which properties dictate the market price), then the renewable material resources are price-driven materials [24]. The use of wood, for example, in a piece of furniture doesn't require certain strict mechanical properties, as a beam in a building would or a member in a machine. Fig. 8 illustrates a comparison between price-driven materials, such as wood, with other performance driven materials in military and aerospace industries.

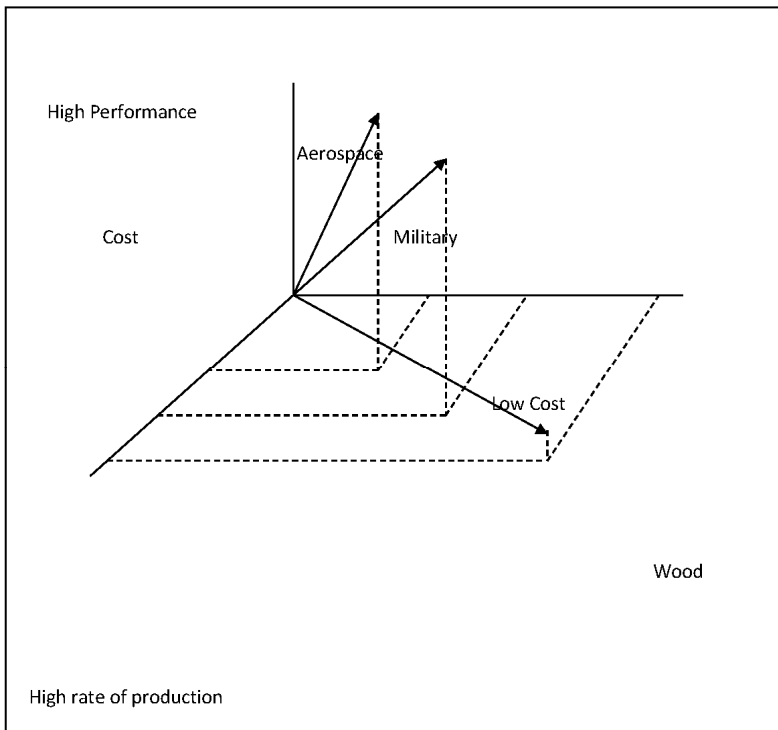


Fig. 8. Comparison between price-driven materials (e.g. wood) and performance-driven materials [24].

We - engineers - need to change our perception of materials. Our preconceived idea that the *renewable material* resources are the only materials with property shortcomings is not entirely accurate [24]. Table 3 shows the properties of several commonly used engineering materials. Wood and other lignocellulosics swell as a result of moisture, but metals, plastics and glass also swell, as a result of increase in temperature. Lignocellulosics are not the only substances that decay. Metals oxidize and concrete deteriorates as a result of moisture, pH changes and microbial action. Lignocellulosics and plastic burn, but metal and glass melt and flow at high temperatures. Lignocellulosics are excellent isolating substances, whereas the insulating capacity of other materials ranges from poor to good. Furthermore, the strength-to-weight and stiffness-to-weight ratios are very high for renewable material resources when compared with non-renewable resources. Therefore, within the impending environmental crisis our globe is facing, we need to develop a new, more judicious vision of the renewable material resources, so that these resources may play the role they should in a contemporary sustainable way of life. This is really a new challenge for engineers!

Material	Insulation	Strength to Weight Ratio	Degradation			Swelling	Determination
			Thermal	UV Light	Acid		
Ligno-cellulosics	Good	High	Yes (Fire)	Yes <sup>(3)</sup>	Yes <sup>(4)</sup>	Yes (moisture)	Yes <sup>(5)</sup>
Metals	Poor	Low	Yes (melt)	No	Yes	Yes (temp)	Yes <sup>(2)</sup>
Plastics	Poor to Good	Fair	Yes (fire)	Yes/No	Yes/No	Yes (temp)	No
Glass	Poor	Low	Yes (melt)	No	No	Yes (temp)	No
Concrete	Poor	Low	No	No	Yes	No	Yes <sup>(6)</sup>

**Table 3. Properties of Engineering Materials [24]**

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<sup>3</sup> Limited to surface.

<sup>4</sup> Oxidation

<sup>5</sup> Caused by organisms.

<sup>6</sup> Caused by moisture.

## **9.2 Towards an Engineering Approach to Renewable Material Resources**

### **9.2.1 Learning from nature: mimicking of structural properties of renewable material resources as a mean for improvement of performance of engineering structures**

One of the advantages of renewable material resources, as compared to the non-renewable ones, is that they have structures (macro), which can be a source of information and technical inspiration for engineers. The study of the structures of renewable material resources may show us how to engineer materials with high functionality, in terms of mechanical properties and yet with high compatibility with natural processes [23]. Let me give an example from our experience with the date palm midrib. Fig. 9-a illustrates the structure of the midrib with respect to the palm, whereas Fig. 9-b give a general view of its cross-section. As distinguished from wood (dicotyledon), the palm midrib (monocotyledon) does not have radial rays, i.e., there is no cross linking between the fibrovascular bundles that are the structural unit of the midrib. Therefore, the fibro-vascular bundles are linked together by the flexible parenchyma tissue, shown in the figure. This structural aspect of the midrib, together with the form of the cross-section, gives the midrib its distinguished property of flexibility and toughness. This explains how these midribs tolerate millions of cycles of loading through their life and do not break, even when subjected to the harsh strong storms of the desert. Fig. 9-c gives a detailed view of the anatomical structure of the midrib. It is clear that, as we move from the periphery inward, the diameter of the fibrovascular bundles increases and their number decreases [20]. Thus, the percentage of fibers, responsible for the structural strength, increases dramatically as we move from the center of the midrib to the periphery. This structure is astonishingly compatible with the distribution of normal stresses in the cross-section of beams subject to bending loads. Therefore, the structure of the palm midrib inspires us to design beams from composite layers to combine the properties of high strength (outside layers) with toughness, (inside layers), which may be required, for example, in design of bridges.



Fig. 9a: PM Anatomical structure

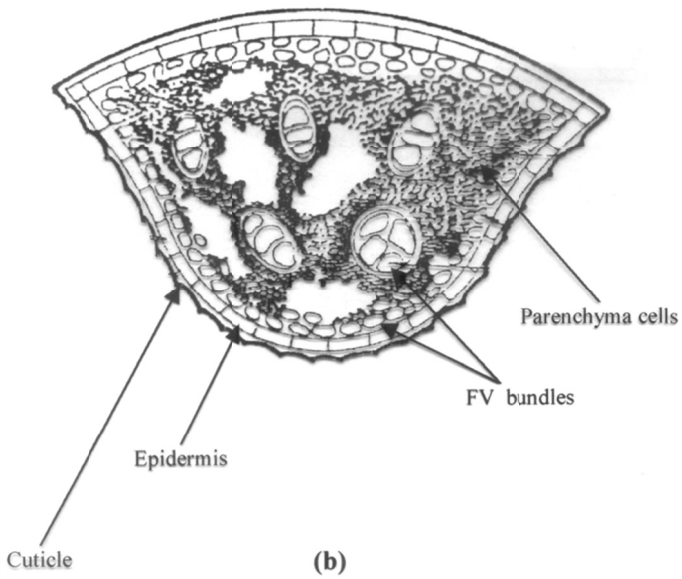


Fig. 9b: Structure of palm rib





Fig. 9c: Palm

Fig. 9: Anatomical structure of the palm midrib and its structure with respect in the palm.

### **9.2.2 The discovery of new properties of the same structure of the renewable material resource to satisfy new modern needs.**

Referring again to the example of the palm midrib. It has been shown by the analysis of the anatomical structure [20], Fig. 9-c, of the palm midrib that the epidermal layer is distinguished with a very high intensity of small diameter fibrovascular bundles, so that there are only a few parenchyma cells in-between. This aspect of structure, as well as the layer of wax covering the midrib epidermis, makes the midrib resistant to dehydration. In addition, the palm midribs enjoy high heat isolation property. Therefore, it is suggested to use the palm midribs with its leaflets in roofing in low-cost housing, sheds and in ecolodges.

### **9.2.3 Reduction of the unpredictability of performance of the resource through the selection of species and the ecological conditions when the resource is planted, the age and harvest time of the resource, as well as its structural arrangement**

A lot of research has been devoted to the investigation of the properties of different bamboo species [25]. Similar efforts have been made with respect to different date palm species in Egypt [13]. It is clear that there are significant variations between different species of the same resource. Ecological conditions, e.g. climate and soil, as well as silvicultural practices also have their influence on the resource properties. Therefore, if we use, for example, culms of the same bamboo species, cultivated under the same conditions and having the same age, we will probably have less variation in properties.

The palm midrib has a cross-section that decreases from below upward. In making mats from midribs for roofing, villagers used to lay the midribs successively one opposite to the other, so that the cross section of the whole mat is homogenized. This is a simple technique for the homogenization of the structural properties of the midrib. Another technique we used is to divide the midrib into three distinct parts equal in size: top, middle and base: each of them having different cross-section dimensions and mechanical properties. This may lead to the manufacture of mats of more homogeneous structure from the top, middle and basal parts of the midrib.

### **9.2.4 Transformation into a new intermediate form having a more homogeneous structure. This intermediate form can be used in development of more engineered products from the renewable resources**

Fig. 10 illustrates the aforementioned idea. The transformation of the original resource into a new intermediate form firstly decreases the variation of properties of the structure. For example, the inner part of the midrib, whether square, rectangular or circular in form, has much more uniform structures of each fibro-vascular bundle and more uniform distribution of these bundles within the new form, certainly more than in the original material. This leads to the homogenization of properties of the material. Secondly the new form gives way to new imagination. For example, when we thought of the triangular cross-section, we obtained a product for architecture uses; as soon as we thought of the square form of the midrib, our imagination went to new fields of products: the blockboard

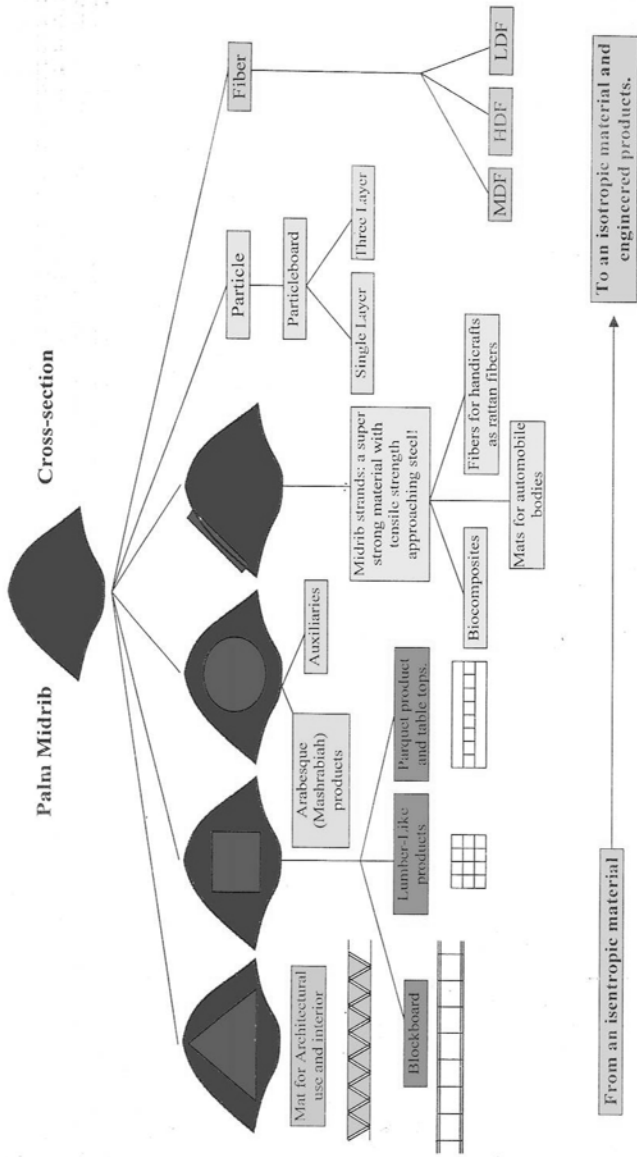


Fig. 10: Transformation of the resource to a new intermediate form: an example on the palm midrib.

and then the lumber-like product from the palm midrib [12], and finally the table top and parquet. The same holds true for the circular cross-section, the midrib strand having tensile strength approaching that of steel ( $\approx 24 \text{ N/mm}^2$ ) [15], particles and fibers. Therefore it is possible, through the appropriate manufacturing process, to transform a renewable resource from an anisotropic material to an isotropic material and an engineered product.

### **9.2.5 Change of the composition and structure of the resource to give it new properties to satisfy new modern needs.**

There is a wide range of techniques that could be used for the aforementioned purpose. Retting is a well-known popular technique, used for the preservation of bamboo against attack by insects. The soaking in fresh water reduces the starch content in bamboo and thus reduces the food for insect and fungi [5]. The impregnation technique is successfully used with wood and has been successfully used with palm midribs [7] for improving the abrasion resistance and water-repellence properties, which opens the potentiality for use in parquet and floor applications.

### **9.2.6 Surface treatment of the resources to give them new properties for certain applications**

Lamination is a widely-used technique for imparting certain properties for renewable material resources. For example, the three-layer particleboards are usually laminated with melamine-impregnated paper to increase their resistance to swelling when used in humid conditions (kitchens and bathroom furniture). The plywood, used for shutter concrete, is usually laminated with phenol-impregnated paper to resist the penetration of water into the wood plies, which may influence the quality of the surface of the concrete. The phenol paintings are very essential for parquet, in order to impart the water repellence property to the upper wooden or bamboo layer.

### **9.2.7 Combination with other resources**

There is a great potentiality for the use of renewable material resources in making composites that have uniform and predictable properties enjoying at the same time the quality of being environmentally-friendly. Bio-composites could be made from renewable material resources using

green chemistry, i.e., using adhesives based on renewable material resource, such as starch and soy proteins. The natural fibers are more and more required to be used for reinforcement of plastics, as a substitute for fiber glass, which is neither combustible, nor biodegradable. There are already many applications of flax and jute fibers in this field. The natural fibers have also a good chance to be used for reinforcement of gypsum in gypsum-fiber boards, a prospective field in the future.

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## CHAPTER FIVE

# RESOURCEFULNESS OF PLANTS AND PEOPLE IN LOCAL AND REGIONAL DEVELOPMENT: COMMENT ON PROF. DR. HAMED EL- MOUSLY'S STUDY "THE RENEWAL MATERIAL RESOURCES: A MATERIAL BASE FOR THE ENDOGENOUS SUSTAINABLE DEVELOPMENT OF THE LOCAL COMMUNITIES"

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### **Introduction**

#### **Shift away**

Renewable material resources are at a central position in international discussions concerning climate change, depletion of fossil fuel resources, security of energy supply in the future and food security. Gradually a shift is taking place from the use of the fossil resources of oil, gas and coal to potentially renewable and biomass resources. The worldwide the interest in renewable energy sources such as solar, wind and waterpower is increasing. But rather central in the global debate is the role bio-fuels (bio-diesel, bio-ethanol, and biogas) could play as substitutes for gasoline and diesel fuels in cars, trucks and power plants. There is strong trend from fossil fuel combustion to bio fuel combustion. Climate change and the



urge to strongly reduce CO<sub>2</sub> emissions are used as arguments to make the shift to bio-resources as they are often presented as sources of 'CO<sub>2</sub>-neutral' energy use. It is rather disturbing that many people seem to consider climate change as the central global environmental problem and fuel substitution as the major solution. Not only do they disregard the many environmental effects of mass production of biomass resources for fuel provision, they also neglect the vast potential of biomass for an enormous array of other uses than as an energy source only. Yet another observation is that the primary resource base of the dominant production and consumption systems is under consideration and is likely to change sooner than the very design of the mostly concentrated production and consumption systems themselves. Apart from fossil fuel reserves, the sun and the ecosystems - both natural and cultural - are resources for the future which are all around us. They present the basic systemic conditions of future orientated, local and regional sustainable development. These ambient resources may change prevailing production and consumption systems into systems that will be virtually all around.

### **Natural production systems**

Trees, shrubs, plants and algae are solar driven, natural production systems. They are natural structures that capture the energy from the sun, and combine and process input gases, water, minerals and substances from their direct surroundings into a huge variety of internal products such as new structural elements, sophisticated complex substances, fibres, resins, gums, cellulose and lignin, sugars and starch. These products all can be considered solar products, resulting from many general but also species-specific plant processes, which emerge in response to the contextual local climatic and ecosystem conditions. Plants and their constituent parts thus consist of stored solar energy at different levels of sophistication, with photosynthesis being the apex of plant life processing. But of course, plants represent much more. They are life, the genetic expression of solar induced natural material creation. Rather than being valued for their food and energy contribution only, plants should also be respected for their role in the transfer of their genetic codes to future generations of plants and for future generations of people. They also represent an enormous variety of material resource potential, of evolution-built solar processing experience. Plants should be valued as abundant design inspiration sources for the future.

## Resource alienation

The extraction, transformation and global use of material and energy resources have critical effects on our environment. Raw materials we borrow from the environment will sooner or later in some form or another be returned. However, most of the time they will then have been completely transformed. The character of these materials, their quantity, concentration and location will often have changed altogether. Therefore, in many respects it can be argued that the societal throughput of materials presents a process of 'resource alienation'.

This process of resource alienation may be evaluated using knowledge of the presence, availability and properties of material and energy resources. Usually, resources are not considered as inextricably integrated within a geological or ecosystem context. Rather, material resources are most often perceived simply as a vast potential for fulfilling well-established and new product needs. Crude oil, for example, is associated with gasoline and plastics, phosphate-containing minerals with washing powder, tropical wood with window frames, and chromium ores with warplanes and nuclear power plants. The prevailing industrial view of resources, it seems, isolates them from their natural and physical context. Another characteristic of this dominant industrial view is the idea of valuing materials purely as collections of certain physical and chemical potential which may be related to specific material applications.

The same resources that provided (and still do) the evolutionary basis of ecosystems and humankind, merely, in this view, reflect compositions of material science-based coefficients, constants and factors. These, however, only emerged as building blocks for standardised production processes and specific material products.

From a perspective of sustainable development, material and energy resources have what may be called an 'eco-holistic code' – unique to each material. That is, materials have intrinsic environmental properties which reflect past and present natural phenomena and which also pose future environmental potential. The identification and implementation of such 'eco-holistic codes' for material and energy resources can contribute to a better understanding of the ways in which resources should be used in order to make progress in a sustainable direction. It can stimulate the revaluation of existing patterns of resource use as well as the development of new processes, products and services.

If, for example, local availability is valued as an important part of a resource code, then renewable materials and renewable energy should become central to the local development and manufacture of certain

classes of processes and products as these resources are readily available and can fulfill functions for elementary needs. At the same time, it would mean that non-renewable resources present in relatively few, remote and isolated locations elsewhere in the world would be used for those classes or processes and products that cannot be realized on the basis of a renewable input or not yet.

Non-renewable resources would then be reserved for the exclusive use of globally recognised basic processes and products meeting the elementary needs for as many people as possible of both present and future generations. Those product development systems in the world which already reflect these values should be supported and stimulated. Of the existing industrial processes and products, however, only those which are most promising for a sustainable continuation should be selected for support.

Gradually, in highly industrialized countries, a discussion has been emerging about the necessary reduction in the use of energy and materials if we are to move towards sustainability. New qualitative thinking is required as well. Thinking about sustainability must change the industrial view on resources. Rediscovery of renewable resources will change the view on the importance and future role of local and regional SMEs. Traditional and existing ones will find recognition and totally new ones will emerge, based on decentralized, renewable resources, while focusing on the fulfillment of elementary needs.

The recent global financial crisis has strongly stimulated an international debate about the causes and the fundamentals of economic systems as well as measures to counter the consequences and reflections on how to prevent such crises in the future. Clearly, the financial and economic issues concerning credit and debt cannot be dealt with in isolation of the credit and debt that has already been created with respect to the world's limited resources, destruction of and damage to natural areas, pollution of the atmosphere and the oceans, the unequal distribution of resources, and the remaining potential for the fulfillment of the needs and aspirations of future generations. Therefore, the 'credit' and 'debt' debate should also encompass the natural and social capital of the world as well as the preservation and development of 'future capital'.

The global financial crisis has come at a moment when developing countries considered as a whole are more vulnerable than they have been in the past. This financial crisis should strengthen the awareness and the obligation of the world community to take measures to counter the recent swift growth of world poverty. The crisis could also serve as a stimulus to readdress poverty issues and to reinforce the UN- Millennium Development Goals. In that respect, a focus on local and regional sustainable

development is crucial. As it is to put priority on the fulfillment of elementary needs. This is an inevitable and immediate requirement in a world that has 3 billion people living on less than \$ 2,50 a day. There is also a requirement for the future as the world population is expected to grow from 6,7 billion people in 2009 to 9 billion in 2050. Most of this growth will occur in the less developed regions of world.

Obviously, the challenge of future needs fulfillment is already huge and most certainly will become one of gigantic proportions. Sustainable product development to meet the elementary needs of the future is an endeavor that will require the best political, scientific, economic and social skills in the world. That objective sharing of ideas about solutions across local and regional contexts and cultures is of utmost importance.

### **Discovery of potential**

Against this background, this paper is a reflection on the paper presented by Prof. Hamed El- Mously, the title of which is: 'The renewable material resources: a material base for the endogenous sustainable development of the local communities'. At the core of his paper is fieldwork among various local communities in Egypt, concerning their potential for endogenous development. His technological focus has been on the availability, characteristics and use potential of local renewable resources which he defines as resources of biological origin and which are sometimes called 'biomaterials'. An essential characteristic is that they are or were alive and thus part of an ecosystem or a living system in its own right. He notes that they have a genetic code from nature, which implies a former and future role in natural cycles. Another characteristic is that they grew by means of the sun. Yet, another characteristic of these material resources is that they are renewable, which he describes as:

"Being part of a relatively short ecosystem cycle" and "conditional in the sense that it depends on (human) influences upon ecosystems".

By presenting a simple classification of renewable material resources, El-Mously stresses the wide variety of these resources worldwide, in species, physical and mechanical properties and chemical composition. The combination of two characteristics - their wide variety and their dispersed distribution - he argues, provides a strong basis for sustainable development, in which each local community can find its own authentic role. He indicates, as a priority area, the economic use of secondary products of renewable material resources. He observes that industrial market thinking puts emphasis on the primary products and the cash crops derived from these resources; an emphasis, he states, which has led to the

neglect of the use of the secondary products of these resources. This, in turn, caused serious environmental effects. However, with sustainable development in mind, these secondary products represent a challenge. El-Mously suggests that based on the concept of 'whole crop use' a quite new vision for economic use of renewable material resources could be developed, making full use of the resource potential of each of their components.

With respect to the broad concept of sustainable development, El-Mously observes great differences in the contexts of the North and the South. In his opinion, through mass media communication, industrialised countries are propagating unsustainable lifestyles in the South. He underlines the importance of cultural specificity of different regions and societies. A first step, he suggests, is to acknowledge and develop the great rich heritage of knowledge of local resources and their sustainable use in each local community. Recognition of cultural specificity, he argues, will also bring into action those cultural values that are conducive to sustainability in each culture.

His plea therefore is to build upon indigenous, scientific and technological capacity development in order for each region, society or culture to find its own version of sustainable development. For this purpose, however, El-Mously points to another ingredient of sustainability in the South; that is, restructuring and strengthening the social fabric of the local community, rebuilding the traditions of participatory local democracy and changing the image of a passive citizen into that of an active member in the process of decision-making with regard to their personal and communal life. El-Mously thus presents the local community as a meeting area for local resources, production and consumption.

He indicates some of the development potentials of local communities: specific values that express their mode of adaptation to their surrounding ecosystems; traditional networks of social relations; a technical heritage (a code of adaptation) resulting from thousands of years of experience and associated with the fulfillment of basic needs (which is a strong cultural expression), and the locally available material resources (both renewable and non-renewable) which may differ in the various cultures of the world.

The basic position, El-Mously then takes, is that if one wants to begin with sustainable development at the micro-level by using local material resources, such a start won't be from zero but rather from a basis of the prevailing cultural repertoire that people already master. Central to the paper of El-Mously is endogenous development, a development from within the local community. He strongly supports the idea that local communities should be assisted in rejuvenating their culture, expressing

their own values and finding new ways to do that. Endogenous development would then consist of a view to local diversity, valuing and accepting some elements of traditional living, a preference to locally emerging ideas and solutions, bottom-up planning, local innovation, self-reliance and each local community with its own database of development options, skills and capabilities.

El-Mously also presents the practical methodology that he would promote in this process of endogenous development. His advice is to work with exploratory experiments aimed at the exploration of the feasibility of the manufacture of a new product or to open new ways for the use of raw material. He proposes to follow an iterative process of thinking and experimentation in order to speed-up innovation. First, however, an application must be found and its marketability explored. The main objective is to explore 'new bridges between these resources' and 'contemporary needs here and now'. As the resources present a 'renewable challenge' for successive generations, each should develop its own edition of their usage. His aim is poverty reduction, which in his view should be based on equal treatment and exploration of poor people's capabilities, on empowerment and on help for them to discover their own potentials. His advice is to begin with a manageable challenge. Handicrafts could be an appropriate start before engaging in any mechanical or automatic production systems.

External help, however, he stresses, should be with restraint as the real success of intervention and inspiration would be the creation of 'local stars and heroes' who may show the way to others and can support ideals among the local population. He strongly advocates convincing people to participate, to work, to network and to link networks.

El-Mously's paper then presents some examples of projects and products based on renewable material resources. The intention in those projects was the dissemination of small-scale industries (SSIs) in local communities which rely on their local renewable material resources. This engagement with the local community has led to technical innovations. Examples presented are projects on the use of date palm midribs for the manufacture of several products, the use of cotton stalks for the manufacture of particleboards and the use of materials from the pruning and renewal of fruit trees.

Finally, El-Mously highlights the neglect of renewable materials in engineering. He proposes an engineering approach that consists of 'learning from nature by mimicking structural properties of renewable material resources', discovery of new properties of those structures, reduction of the unpredictability of performance through selection of

species and ecological conditions, transformation into a new intermediate material of a more homogeneous structure, change of the composition and surface treatment to get new properties, and bio-composites.

### **Resourcefulness of plants**

The core argument of the paper of Prof. Hamed El-Mously is that locally available renewable material resources should be put central in achieving poverty reduction, economic development, innovation and sustainable development of the local community. In his approach, the local community serves as the hub of interaction between local resources, production based on those resources, and consumption activities.

El-Mously's paper begins with the statement that: "The renewable material resources (RMR) are cheap and annually available in the rural areas in most of the Third World Countries." That is correct, but as has been indicated above, it is also quite conditional as it depends on the character of human influence and intervention. Overexploitation might occur and processes of pollution and degradation may be present. El-Mously rightfully argues that the precautionary principle applies but with a sound scepticism concerning human intervention in nature and that, therefore, the process of natural renewal must be given priority over cultural renewal. However, some other considerations should be given even higher priority.

As Tromp concluded, renewability is a theoretical characteristic of resources which does not guarantee actual renewal. Actual renewal of a renewable resource depends on human influences; it has a spatial aspect and involves all ecosystem cycles of which the resource is part. As a part of the ecosystem, the entire living trees, crops or plants are the relevant form of this resource. In general, they can be utilised without extraction because they can serve to provide various functions such as regulation, carrier, production and information functions. Thus, the process of natural renewal implies the conservation of nature, dealing with nature and its basic functions as a sanctuary of biodiversity for the future, and developing nature in order to enlarge and prolong its capacity and renewability potential well into the future.

The highest level of natural renewable resource potential is the living natural ecosystem, with all of its integrated subsystems, interactive processes and interconnected relations. Therefore, rather than only valuing the results of annual growth of renewable material, such as the yield of pruning, much more value is or may (in future) be derived from the ecosystem functioning as a whole. This holistic approach also applies to

individual trees, shrubs, plants and algae. The date palm, for example, is a complex material system with an enormous variety of interconnected potential for human use. Since ancient times, humans have interacted with this plant and based on very many generations of iterative experience, they have developed complex multipurpose use systems that relate to the date palm as a complex living system.

In research on various trees, shrubs and plants, and especially about multi-purpose ones, it was striking to find a great number of words referring to the variety of potential properties, functions, products, uses and applications beginning with the character 'f'. A list emerged of some forty words demonstrating that plants are very resourceful indeed: fabrics, factory, fats, farm, felt, fertiliser, fibres, field, figs, figures, fire, firm, fishing, fixative, flat, flavour, fence, fleet, flesh, float, floor, flour, flora, flowers, flute, fodder, foliage, food, forage, forest, fort, foundation, fragrance, frame, frond, fruits, fuel, fume, fun, fungi, furniture, future.

This list demonstrates the broad variety of applications that might be useful for education purposes. This idea, however, is far from new. In his Ph.D. research on elementary education at Nippur, Veldhuis deals with lexical lists used in Mesopotamia in the 18th century B.C. One scholastic exercise he describes was to use lists of trees and wooden objects for writing practice on tablets of clay. These were thoroughly structured in sections and sub-sections. Such lists served as a way of passing on the writing system to future generations. Veldhuis gives a list of more than 700 words for trees and wooden objects, as one of the elementary practices of that time, which was part of a broader educational system. He considers it highly probable that the teacher knew the text by heart and even in two languages.

Nowadays, research and education on renewable material resource systems are just as valuable as they clearly were in Mesopotamia at that time. However, the knowledge concerned may currently not be as thorough, well established and ambient as in the civilisation of Mesopotamia. El-Mously, in this respect, expressed his concerns about the neglect of the science on renewable materials in current engineering curricula. He stresses the importance of renewable resources for sustainable development. In light of the global developments and the predicted shift in the use of resources from non-renewable to renewable ones, this is a very correct observation. But developing a vision on renewable material resources does not only present a challenge to engineers. It is also a challenge to science in general, as is the urgent need for the development of sustainable systems of production and



consumption, for sustainable education and for local and regional sustainable development participation.

## **Resource potential**

Renewable material resources consist of complex systems and parts. Their sub-systems and sub-sub-systems have unique, specific, general and common properties. The character of the use that is made of these resources depends on the availability of knowledge, experience, methods, tools, machines and infrastructure. First and above all, however, the starting point is to identify the prevailing concepts about resource use. Various terms can be mentioned such as ‘full use of resource potential’, ‘total resource recovery’, ‘whole crop use’, ‘integrated usage’, and ‘cascading’ of resources.

Once a part of a renewable resource has been extracted, the highest level of its resource potential should be maintained for as long as possible, and as much of it as feasible should serve the next and many other future processes, applications and products. A hierarchy of resource potential would be: natural functioning - use of functioning – use of total characteristics – use of shape and structure, the physical components – chemical properties – energetic properties – elementary properties.

Some basic notions are that it is important to identify unique properties; a hierarchy in potential uses may be defined and then repeated and subsequent use could be taken into account, and the duration of usage is also a consideration, of course.

The various complexes of combined use potentials of a plant and of its parts should be matched with the hierarchy of elementary needs that people wish to express. Thus, several levels of potential value creation can be distinguished. Once sustainable science, knowledge and applications are more developed, more value, more added value, multi-times of value and multiple-types of value can be derived. Thus, multi-purpose and multi-uses plants, trees and shrubs can become an economic source of local and regional creation of sustainable value, well into the future.

The example of the date palm illustrates how parts can be interconnected into products. El Mously clearly demonstrated the realization of various forms of innovation by discovery of new properties, new applications, new combinations, new techniques and new future potential such as bio-composites. His work can be considered to be of a pioneering character, providing new insights on the required poverty reduction, science redirection, technology development and future potential of local renewable resources for sustainable development.

Some considerations, however, might even amplify this potential. It is worthwhile to develop new concepts that address the complexes of properties of plants on the one hand and the complexes of basic needs requirements on the other hand. The rather primitive and indiscriminate primary input of renewable material resources solely for energy purposes should – unless the mere survival of people is concerned - wherever possible be substituted by a much more sophisticated system of material and properties usage for various subsequent needs, through lengthy phases of application and time. Thus, a maximum of benefit may be derived from the material sources concerned. This will lead to less pressure on the extraction and provision of primary renewable material resources at the front-end of the material use cycle. The stored solar energy may ultimately still be tapped, at the back-end, and after all.

Some parts of renewable resources, such as fibres, can be used to make structures, for which otherwise complete plant structures would have to be used. Particles can become panels by using natural glues, resins and polymers. Three-dimensional products can be shaped from paper mash. Paper, in turn, can be made from non-wood sources and from new, alternative fibre sources such as the fibre plant Kenaf. This would contribute to a practice in which virgin wood is no longer used for papermaking but rather at its almost highest natural potential, which is that of structural applications. El-Mously's invention of using midrib blocks to make panels fits perfectly well within this new resource use philosophy.

In research on renewable material resource systems for sustainable SMEs, various tree and plant use systems were studied and one of the conclusions was that a vast potential exists of combining different plant use systems, old and new technologies, and indigenous and traditional knowledge. This in fact is the vast natural inheritance that biodiversity and many generations of human experience represent. It presents an inheritance that can serve as roots for sustainable development worldwide.

### **Resourcefulness of people**

The current, highly centralized, non-renewable resources-based world economy has largely been built on unsustainable technologies. Therefore, the transition to a new, bio-based and future-orientated world economy will inevitably require the development of new sustainable technologies. Of course, existing technology can be adjusted and adapted, but as El-Mously has demonstrated with his new date palm leaf midrib technology, new technology has to be developed, which fits the renewable material resource concerned. Another example of that is the tree-free paper

technology developed by Tom Rymysza. Under the prevailing tree-paper dominated technology regime, he was forced to develop his own kenaf paper technology fit for this particular fibre plant. Clearly, it is the variety, diversity and variability of renewable material resources that do and will challenge engineers. New dimensions of the technology to be developed will be 'CO<sub>2</sub>-reduction', 'context', 'scale', 'logistics' and 'integration'.

In her PhD-study on sustainability and the indigenous materials heuristic, Pearce defines indigenous materials as all materials that remain in their bioregion, from harvesting, through processing, and on to incorporation into a built facility or artefact. She considers a bioregion to be a geographical area containing groups of ecosystems which are related to each other and which may or may not be dependent on exchanges of matter and energy for coexistence. The most common reason cited, for using indigenous materials, she notes, is minimisation of the transportation portion of energy embodied in the material. Another reason given is the idea that using materials generated within a bioregion to meet the needs of the bioregion increases its robustness and stability. Pearce shows that "indigenous materials in general use fewer energy and material resources for transportation and processing "overhead" than their non-indigenous counterparts, especially when the infrastructure for harvesting, processing and transporting those materials is already in place. The potential for environmental degradation is highly dependent on the scale of material harvest and use as well as the context in which the harvest occurs. For example, within a relatively sparsely populated region, harvesting some of a particular material may be well within the carrying capacity of the material within its ecosystem and thus the harvest may be sustainable."

However, as Pearce points out, increasing the scope of the harvest may push the ecosystem beyond its carrying capacity, rendering the harvest unsustainable. Positively, she argues that an important effect on ecosystems which results from indigenous resource use is the psychological and physical self-interest people have in the health of the ecosystems by which they are directly affected: "If resources come from the same ecosystem in which people themselves are located, people may structure their use of the resources so as to minimise environmental degradation of that ecosystem." Yet, another important consideration of Pearce is that from an ethical standpoint, indigenous materials act as a socioeconomic equaliser. "When materials are available locally and can be harvested at little or no cost by the people who need them, these indigenous materials may solve the problem of intra-generational equity by providing the means for otherwise underprivileged people to construct housing and other facilities for themselves without other technological or

economic intervention.” Furthermore, Pearce argues, using indigenous materials empowers individuals by reducing their reliance on externally manufactured products for which they have to pay directly.

She finally concludes that no clear answer currently exists to the question of whether the use of indigenous materials is more sustainable than current patterns of material use: “The importance of context is paramount in deciding the answer to this question, particularly in terms of the existence of infrastructure for harvest or transportation. What can be clearly stated, however, is that it is more sustainable to use materials which: 1. Have the lowest possible life cycle consumption of matter and energy; 2. Have minimal net negative effects on the natural environment; 3. Maintain some reasonable level of human satisfaction.”

She makes a plea for policy initiatives to impose minimum standards on individual material harvest efforts. Furthermore, she advises: “Beginning with mechanisms for monitoring and tracking individual harvests, the proposed sustainability standards must ensure that individuals do not intentionally or unintentionally compromise the health of ecosystems by harvesting beyond the sustainable yield of the environment. In addition, programs of education for those who harvest sustainable materials would help improve the learning curve for using new technologies and ensure that harvesters are aware of the most current and least damaging techniques and tools for harvesting.”

### **Bio-integrated systems**

In addition to the use of products from a plant such as the date palm, it is possible, of course, to combine the materials that emerge from date palm processing with materials of other plant resources. In order to add value and to benefit from the creation of added value, this should preferably be considered and realised at the front-end, or the design phase of the use cycle of date palm products, rather than at the back end, where various types of date palm product wastes will be generated. Such wastes, however, can still produce value and in turn may also be combined with other types of agro-processing wastes and agricultural residues. Yet, even other sources of natural organic waste can be integrated in the systems of material, byproduct, residues, and waste production. This is the broader view that is promoted by Doelle. He refers to bio-integrated systems for rural prosperity as follows: Given the current accessibility and knowledge levels of agricultural biotechnology, there is no reason for rural farming communities to struggle on low per capita incomes. A complete utilization of all renewable resources, such as plant biomass, crops, human and

animal [livestock] wastes, can give self-efficiency and sustainability to the rural communities and the environment. But farming has to change from the old industrial-economic into a socio-economic structure using bio-integrated systems and current bio-refinery concepts for energy, food, fertilizer and commodity product formations. Such a system will help in eradicating poor health and living standards, poverty and starvation, which in turn will automatically influence population growth.” Anaerobic digestion of waste and effluent is an integral part of what he calls ‘environmental biotechnology’. He concludes that: The biotechnology issues for developing countries in future requires a change from the presently commercially driven to a more human development, combining 'old' and 'modern' biotechnological techniques for the improvements in the health and living conditions of 80% of our world population.

### **The role of SMEs in sustainable regional development**

In a case study on the role of small manufacturing enterprises in sustainable regional development in Ismailia governorate, Egypt, the subject of a Ph.D. study, Hefnawy found that the production processes incorporated within SMEs have serious environmental impacts. He reports that this is attributed to the lack of environmental awareness as evidenced by the overuse of available raw materials and energy, without regard to the potential needs of future generations, as well as the absence of production control mechanisms. The percentage of SMEs in his study area that depend on local natural and renewable raw materials did not exceed 10% in spite of the fact, he comments, that needed raw materials are already available locally. More than 70% of SMEs within the target area in the wood industry sector import raw materials for product manufacturing. Hefnawy's research reveals that the dependence of SMEs on alternate, local raw materials will minimize the environmental impacts resulting from the transport process which, he says therefore, will lead to new job creation opportunities that did not previously exist within the region. His advice is to adopt the use of cluster and network policies for SMEs to maximize their role in achieving sustainable regional development.

El-Mously's paper takes endogenous development as a central concept. Endogenous knowledge will be basic to that. Müller, in this respect, stresses that endogenous knowledge is often confused with and conceived as synonymous with traditional knowledge. He is of the opinion that most traditional knowledge is contained within the endogenous knowledge confines, and that endogenous knowledge systems in addition include all such exogenous knowledge elements that gradually have been assimilated

or 'endogenized'. In an article about the uptake of environmentally sensitive innovation to transform production systems in Sub-Saharan Africa, Muchie states that the best way forward to African economies is to learn quickly to reveal new comparative advantages based on sustainable development. Which, he thinks, is translated in the African context as the creation of new industries by drawing from the natural resource base of the countries. Therefore, more empirical studies must be done on the creation of value-added manufacture of the agrarian sector through eco-technology capability and competence building and learning.

Although El-Mously also addresses cotton stalks, sugar cane and fruit tree materials, the date palm is the most instructive resource. It is an impressive ancient source as well as a future promise for both sustenance and development. One subject, however, El-Mously did not address is the natural production of sap by the date palm and its potential. A company in Oman has successfully produced and tested ethanol from date palm sap. Thus, locally produced Ethanol could be used as a bio-fuel for local generation of 'green electricity'.

### **The local community**

The local community, according to El-Mously, serves as a meeting area for local resources, production and consumption. Here the spheres of local resources, production based on local resources and consumption activities encounter. However, as has been discussed above, there is much more to it. The local community can be illustrated as being at the heart of a three-dimensional crystal, having a square level with the corners 'companies', 'consumption', 'culture' and 'context', and beneath and above this plane are the points of 'components' and 'concepts'. Within the community or the region, clusters of bio-SME companies transform concepts into products for the fulfillment of elementary needs. As has been elaborated above, the character and intensity of a local community's use of resources depends very much on the resource use concepts that have been locally developed or have become known.

One observation of El-Mously is that there is a need to view diversity as normal, and similarity of local communities as the exception. What can be derived from the above argumentation concerning the resource potential of renewable material resources, however, is that several of the principles involved are of a universal character and that the application of these principles and the value attached to potential of resources is very much of a contextual character. A hierarchy of principles of renewable material resource use here suggested is: - Respect the ecosystem functioning; -

Apply multi-purpose use; - Apply multi-use of plant parts; - Combine products from trees, shrubs and plants; - Cluster SMEs; - Reevaluate agro-production and agro-processing wastes; - Realise bio-integrated systems.

The local renewable resource production and consumption of waste-derived biogas and possible future date palm sap-derived ethanol (a name here suggested would be: 'date ethanol') could be used for on-site electricity generation. That would – among other things – facilitate the realizations of 'Bionetic SMEs', a new type of SME working in a bioregion, its networking, and its involvement with advanced information and communication systems: 'Bio- SME' concern for natural life and supportive ecological systems; 'Net-' as the SMEs will participate in many networked activities and shared resources; and 'IC-' (Information and Communication) technologies will play a significant role in the success of the SMEs, locally, regionally and internationally .

According to Wimmer, rural electrification is a rapidly developing field. She observes that rural electrification is in transition, stimulated by a variety of innovations which interact and reinforce each other: "Hybrid systems, for instance, can use solar, hydro, wind, biomass and diesel energy in clever combination both off and on-grid. Already they supply power day and night, summer and winter in even widely dispersed villages because they can be installed where needed, allowing for a distributed and decentralized infrastructure of power supply", to which she adds: "Greater things lie ahead because innovation is about much more than technology and products. It is about applications, business models and entirely new markets – far different from those in the industrialized urban world. The combined force of these innovations can speed-up rural 'evolution' and help meet the untapped energy needs of two billion rural customers"





**PART TWO –**  
**THE CONTEMPORARY ARAB CONTRIBUTION**  
**TO WORLD CULTURE IN THE SOCIAL**  
**SCIENCES**

## CHAPTER SIX

# CRISE FINANCIERE OU CRISE HISTORIQUE DU MODE DE PRODUCTION CAPITALISTE ?

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Au milieu de l'année 2007 éclate un krach financier sur le marché de crédit foncier de l'économie des Etats-Unis.

L'éclatement se fait, à des rythmes variés, par l'effondrement des hyperpuissants financiers : des crédits surtout des banques d'investissement et d'assurance. L'ampleur de l'éclatement provoque la panique, non seulement au niveau du public directement touché, mais aussi au niveau des autorités des Etats et des idéologues du "néolibéralisme économique", surtout des économistes, qui se mettent, hâtivement, non à comprendre, mais à expliquer. Ainsi se succèdent des explications du phénomène et des propositions de mesures de confrontation sans se donner le souci de se rappeler des séries d'éclatement depuis mars 1968 (crise du US\$), août 1971, mars 1973, janvier 1974 et surtout la série de krachs: août 1983, octobre 1987 (the junk bonds krach), janvier 1990 (au Japon), août 1990 (après l'invasion du Kuwait par l'Iraq), septembre 1990 (effondrement du marché financier international après une forte vague de spéculations, 1994 (la crise économique au Mexique), 1996-97-98 la crise économique des économies du Sud-Est Asiatique, janvier 1999 (Brasil et autres pays de l'Amérique Latine), décembre 1999 (la crise financière en Turquie), 2000 krach Nasdaq, 2001 récession, décembre 2001 faillite d'Enron, juillet 2002 faillite de World Com; nous disons que sans se soucier de se rappeler ces séries de krachs, les explications avancées tendent vers considérer la crise financière, en soi et quelquefois par soi, mais rarement à partir du mouvement de l'économie réelle dans le temps et encore pas à partir du mouvement historique de l'ensemble capitaliste : le divorce entre l'explication de la crise actuelle et une *théorie* du *développement* de l'économie capitaliste est consacré.

Ici, nous tentons de présenter une méthodologie de l'étude du phénomène dans son contexte d'ensemble et dans le mouvement historique de cet ensemble. Et pour ce faire :

- Nous commençons par un chapitre qui vise à préciser notre langage, les concepts et les catégories théoriques,
- dans un deuxième chapitre nous envisageons "la crise" par une étude adoptant une méthodologie historique tri-dimensionnelle.

## **Chapitre 1 : L'Economie capitaliste : concepts et catégories théoriques**

**I - *Nous sommes toujours au sein de l'économie capitaliste, devenue vraiment internationale mais nullement globalisée***, car son mouvement international implique la désintégration par les unités sociales, la balkanisation des unités politiques, les sociétés étatiques et l'isolement social de l'individu considéré principalement, si non uniquement, en tant que nombre dans les chiffres d'affaires des entreprises transnationales (à coïncider par des campagnes violentes et agressives de publicité). En tant qu'économie capitaliste, elle garde toujours les caractéristiques principales du mode de production capitaliste :

- a) La propriété privative (individuelle ou étatique) des moyens de production en particulier et de la richesse économique, en général ;
- b) la recherche du gain monétaire comme but immédiat de l'activité économique, symbolisé par la maximisation affamée du profit monétaire dans l'activité d'investissement, de la production, de la commercialisation, et qui dépasse même l'activité économique vers les domaines des autres activités sociales.
- c) Le fonctionnement morcelé des unités privatives opérant, non seulement d'une manière isolée, mais aussi en se pliant, chacune, à ses secrets internes, dans une atmosphère enveloppée par l'incertitude presque totale: par rapport aux marchés de ses inputs, au marché de son output, au fonctionnement des autres activités économiques avec lesquelles l'entreprise a des rapports de l'interdépendance mutuelle, à la modalité du mouvement de l'ensemble de l'économie nationale et celui de l'économie internationale. Dans ce monde d'incertitude, les entreprises prennent les décisions économiques, en termes monétaires, même quand il s'agit d'une activité économique réelle, sur la base du mouvement hasardeux des prix, non seulement actuels mais aussi

potentiels. L'essentiel est l'unité de la micro-économie et de la macro-économie : c'est-à-dire l'unité de l'entreprise et du ménage en tant que fournisseur de la force de travail et l'unité de la consommation privée et de la consommation publique dans un monde d'incertitude guidé par un mouvement.

**II - *Nous sommes toujours au sein de l'économie capitaliste où l'activité économique a, à partir de l'utilisation généralisée de la monnaie, un double aspect, l'aspect réel*** : le monde des forces productives réelles réunies autour de la force de travail au sein du processus de travail social, produisant les marchandises aptes à la satisfaction des besoins; et ***l'aspect monétaire*** : à travers duquel les valeurs en temps de travail sont formalisées sous une forme qui les traduit en unités de mesure commune, permettant ainsi de voir le résultat de l'activité économique, production, répartition et échange, au niveau de l'ensemble économique à la fin d'une période de production, et de prendre, à partir des prix monétaires, les décisions à prendre par le capital qui doit à la monnaie la faveur de lui avoir donné la forme initiale (du capital-argent) qui lui permet, non seulement de commencer son cycle comme intermédiaire du cycle de la production sociale, mais aussi d'avoir l'autorité de déterminer la modalité de la répartition des forces productives entre les différentes branches de l'activité économique à travers le mode de *l'orientation du capital-argent* dans l'ensemble de l'économie nationale (et, à une deuxième étape dans l'ensemble de l'économie internationale).

Avec l'aspect monétaire de l'activité économique, nous devons envisager avec tout le soin dû, le long voyage historique de la monnaie au sein du monde des marchandises, surtout dans l'économie capitaliste, dans le processus de son devenir de plus en plus abstrait jusqu'à ce qu'elle devienne la plus abstraite dans le monde des marchandises. Et à partir de la monnaie très abstraite on peut sécuriser tous les droits privatifs, de propriété et de créance.

**III - *Nous continuons toujours à préciser des concepts relatifs à l'économie capitaliste où le cycle de la production sociale réelle se réalise par l'intermédiaire du cycle du capital social*** : le cycle de la transformation du capital d'une phase à l'autre, principalement sur le marché, mais avec une phase d'interruption pour centrer la préoccupation sur la production, lieu de la production du surplus économique: ayant, à chaque phase de son cycle, une forme différente, avec une *logique* différente et un but différent, qui peuvent (ou pas) réaliser le but d'ensemble : le profit monétaire.

Le cycle du capital se fait dans *trois* phases comme un *seul acte d'échange* : acheter des forces productives pour transformer leur valeur en une valeur marchande, sous une forme réelle, plus grande, et vendre la marchandise réelle pour réaliser le profit monétaire :

- a) première phase, sur les marchés des forces productives, transformer le capital-argent en capital productif (achat sans vente),
- b) deuxième phase, loin des marchés, sur le lieu de la production : transformer le capital productif en capital marchand, impliquant une valeur additionnelle,
- c) troisième phase, sur un autre marché des marchandises produites à écouler : transformer le capital marchand en capital-argent (vente sans achat) ; réaliser le profit monétaire : but immédiat de la production marchande.

L'acte global d'échange, dont les deux composants sont séparés dans le temps (et peut-être dans l'espace aussi), *peut se compléter à travers les trois phases*.

C'est grâce à *la monnaie* que le capital, en tant que rapport social, peut effectuer son cycle : à partir des fonctions de la monnaie : en tant que mesure des valeurs elle peut être intermédiaire d'échange. Et grâce à un acte d'échange non complété, elle est stock de valeur (épargnée), et en tant que stock de valeur elle fournit au capital sa forme initiale : capital-argent. Ce capital-argent peut être utilisé comme *pouvoir d'achat* : procurer des marchandises à utiliser : la monnaie est utilisée en tant que pouvoir d'achat. Le capital-argent peut être utilisé aussi, pas en tant que pouvoir d'achat mais en tant que *finances* : utiliser la monnaie comme source d'un revenu monétaire courant et régulier. Ainsi se manifeste le *capital financier*, ayant comme soubassement le capital-argent.

Suivant ce cycle, on peut distinguer, à partir du capital-argent, trois formes du capital :

- *Financier* : ayant la logique de maximiser un profit financier, à travers un cycle d'exploitation aussi rapide que possible et subissant le moins de risque possible. Ce capital financier, consolidé par son accouplement avec l'Etat, va, dialectiquement, contrôler, avec le développement du système bancaire et financier, le capital-argent à la disposition de la société.
- *Productif*, ayant une logique de maximiser un *surplus économique* sous sa double forme (physique/valeur) au sein du processus de l'économie réelle. Son cycle est, objectivement, plus long, exige

plus de patience, implique beaucoup plus de troubles potentiels au sein de l'entreprise et subissant, à l'instant et éventuellement, beaucoup plus de risques, surtout le risque de la lutte concurrentielle au cours de la phase du capitalisme concurrentiel et la lutte monopolistique de la concentration et la centralisation du capital dans le développement de l'économie capitaliste.

- *Commercial*, capital qui espère un cycle rapide, mais déterminé par son parcours dans l'espace et dans le temps. Dans son activité commerciale, il part d'un capital-argent cherchant un *profit monétaire d'aliénation* à un autre capital-argent, par l'intermédiaire d'un acte d'échange qu'il espère compléter sur les marchés de la même marchandise : acheter pour vendre et s'approprier le profit d'aliénation à travers les différences des prix dans le temps et dans l'espace ou bien encore dans les deux.

Objectivement, le cycle du capital commercial est plus long que celui du capital financier et plus court que celui du capital productif.

Si le capital financier et le capital commercial ne peuvent exister ni continuer à vivre que sur la base du résultat de l'activité productive du capital productif, seulement l'économie réelle, c'est-à-dire les forces économiques, humaines et matérielles, employées dans les secteurs financiers et commerciaux assurent sa survie; c'est le capital financier qui peut, grâce à son monopole effectif; camouflé par un "Anti-Trust Law" de la création de la monnaie, surtout la monnaie bancaire ( monnaie de crédit ), et donc du capital-argent (principalement rassemblé au sein du système bancaire/financier); c'est le capital financier qui peut décider de la modalité de la répartition du capital-argent entre les trois domaines du capital, mais à partir de sa propre logique. D'où la possibilité historique que, avec l'aggravement des contradictions au sein de l'économie réelle, aggravation produite par la modalité des rapports de production correspondante au degré de la polarisation économique (dans la propriété et le contrôle effectif de la richesse économique) et la modalité des changements technologiques au niveau de l'entreprise capitaliste à la phase du développement de l'économie capitaliste internationale où la compétitivité sur le marché international revient à celui qui gagne la course des innovations technologiques; avec cette aggravation le capital-argent sera orienté graduellement loin de la production réelle vers l'activité financière pour dégager autant que possible une part du surplus économique produit au sein de l'économie réelle, même avec son rétrécissement relatif, c'est-à-dire par rapport aux capacités productives des forces de production (humaines et matérielles) déjà existantes, surtout

si le rétrécissement relatif de la production réelle peut être compensé par l'orientation par le capital financier d'une partie du capital local vers l'économie réelle des autres économies "nationales", et plus particulièrement quand il s'agit de la production des *biens de salaires* pour la classe ouvrière dans l'économie mère, l'investissement à l'étranger, surtout quand il se réalise par une "promesse de paiement" (et pourquoi pas?, puisque "In God We Trust") sans contrepartie en marchandises réelles. Le même résultat peut se réaliser à travers des "termes d'échange" favorables à l'économie mère ou par l'utilisation des armes, physiques ou idéologiques, pour imposer à d'autres peuples l'exploitation de leurs forces productives (nous avons en tête, en tant qu'habitants du monde arabe, la série de guerres "post-modernité" depuis 1948-1956-1967-1991-1998-2003-2006-2008/9, sans mentionner les noyaux de lutte armée autour de la "dualité pétrole-water").

**IV - *Le mouvement de l'économie capitaliste ne peut être précisément conçu que dans le cadre de l'ensemble social, dans sa pratique socio-économique.*** Pour comprendre cet ensemble, on peut le concevoir, au point de vue méthodologique, comme *un grand ensemble de relations sociales composées de deux grands sous-ensembles* :

- le sous-ensemble qui embrasse les relations des processus économiques autour du processus de travail social et
- le sous-ensemble des relations entre l'économie et la vie sociale dans ses relations avec l'environnement.

1) Quant au *sous-ensemble des rapports économiques*, on peut le concevoir comme composé des deux sous-ensembles des rapports sociaux suivants :

**a-** au niveau de *l'entreprise économique*: le sous-ensemble des rapports au sein du travail assuré par "le travailleur collectif" défini selon le système de la division du travail autour des techniques de production utilisées, au sein de l'entreprise;<sup>1</sup> un sous-ensemble des relations qui seront la fonction du nombre des individus formant "le travailleur collectif", l'appartenance sociale et culturelle de chacun, son éducation et sa

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<sup>1</sup> Ce sous-ensemble évoque, sur le plan théorique, la théorie de l'entreprise capitaliste : ses caractéristiques, surtout son but immédiat, la division interne du travail, sa place dans la matrice des relations de l'interdépendance mutuelle au sein de l'appareil productif – la théorie de la production marchandise capitaliste – la théorie de la valeur.

formation technique, sa connaissance et son expérience relatives aux techniques de production utilisées, les habitudes du travail collectif et les règles élaborées de ce travail; le degré de la concordance formulé par tous ces éléments en leur interaction mobile. *Un sous-ensemble dont la nature et la modalité de fonctionnement affecte directement la productivité du travail et donc la valeur de la marchandise et l'ampleur du surplus économique.* Le résultat de l'action de ce sous-ensemble serait, à son tour, affecté par la modalité et la rapidité du changement des techniques utilisées par "le travailleur collectif".

Le sous-ensemble des rapports sociaux directs et indirects, au sein du processus qui embrasse et *la production des marchandises, avec le mode de la répartition* des revenus monétaires qu'il implique, et *la modalité de leur écoulement* sur le marché (lors de la commercialisation afin de réaliser le profit monétaire).<sup>2</sup> Ici se relie à la fois les relations de création de la valeur produite et donc le *pouvoir d'achat potentiel* et la capacité absolue de la consommation sociale contenu dans les revenus monétaires créés avec leur répartition entre salaires et la plus-value déterminant ainsi la capacité relative de la consommation sociale, d'un côté, et entre ceux qui s'approprient le surplus, de l'autre côté; nous disons qu'ici se relie ces relations avec les conditions de la réalisation du profit monétaire sur le marché d'écoulement des marchandises: ici, "le pouvoir d'achat" *potentiel* au sein de la production devient l'actuel sur le marché, lors de la transformation du capital marchand en capital-argent pour que le profit monétaire soit réalisé.

C'est dans le cadre de ce sous-ensemble que le profit monétaire produit des conditions de production, *pourrait être réalisé ou non*, par des conditions relatives à la fois à la modalité de la répartition des revenus (surtout entre les salaires et les autres revenus de la propriété) et les conditions de la commercialisation des marchandises à écouler : *le moment, heureux pour le capital, d'une répartition de la valeur produite qui se fait au détriment de la majorité peut se traduire* à tous moments malheureux lors de la tentative de réaliser le profit sur le marché d'écoulement. C'est le lieu de rencontre de la surproduction, fruit de travail, avec la sous-consommation comme sort des travailleurs. Et, pour la société c'est le lieu où se montre l'écart entre *la capacité absolue* de la consommation sociale, comme déterminée par sa capacité sociale de produire, et la capacité *relative* de consommer comme déterminée par le

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<sup>2</sup> C'est ce sous-ensemble qui évoque, sur le plan théorique, à partir de la théorie de la production, la théorie de la valeur et la théorie de la répartition des revenus, la théorie des prix des différentes formes du marché.



mode de la répartition des richesses et des revenus entre les classes et les couches sociales.

La polarisation élargie de la richesse économique, qui implique une répartition des revenus plus inégaux pour les salariés, et les difficultés d'écoulement provoquées soit par la lutte farouche entre les monopoles sur les marchés, soit par la résistance de certains peuples qui cherchent à s'en débarrasser, peuvent exaspérer cette contradiction surproduction sous-consommation.

**b-** Le sous-ensemble des rapports sociaux du *processus économique à son niveau macro-économique* :

On a d'abord un sous-ensemble des rapports relatifs à l'équilibre possible entre les différentes branches économiques et entre les agrégations économiques représentant le résultat du fonctionnement du processus économique *au cours d'une seule période de production*,<sup>3</sup> dans l'engrenage de l'interaction de deux aspects de l'activité économique : réel et monétaire. Nous sommes ici au niveau du fonctionnement de l'ensemble du processus économique où le résultat sera la fonction des multiples actes individuels *morcelés*, des actes contradictoires dont le résultat d'ensemble ne pourrait être le simple total de l'acte individuel soumis à la puissance. Le résultat peut venir en dehors des aspirations des joueurs. La balance sera presque toujours aléatoire, non seulement au sein de l'économie réelle (goulots d'étranglement, chômage des ouvriers, non-utilisation des capacités productrices matérielles) mais aussi au niveau monétaire, inflation ou déflation ou bien les deux à la fois. Le mode de fonctionnement du processus économique, réalisé par des multiples décisions morcelées et contradictoires prises d'abord en termes monétaires, ce mode ne peut être, au niveau de l'ensemble que non balancé pour une seule période de production dans l'absence d'une coordination préalable au niveau de l'ensemble. La contradiction surproduction/sous-consommation s'aggrave par la non-concordance des résultats des décisions individuelles morcelées de *l'économie monétaire*. La situation sera encore plus aiguë quand on passe au domaine des finances où domine la *logique du capital financier*.

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<sup>3</sup> Ce sous-ensemble évoque, sur le plan théorique, l'investigation critique de toutes les théories macro-économiques, et surtout l'analyse de l'école Suédoise et la théorie Keynésienne en étant conscient des limites de ces théories pour comprendre le fonctionnement de l'économie capitaliste, surtout dans les économies capitalistes sous-développées.

Nous avons, ensuite, un sous-ensemble des rapports relatif à l'équilibre du processus économique *dans le temps* : *d'une période de production à une période de reproduction* ; avec l'investissement créant la capacité productrice à une période (celle de la maturation de l'investissement) pour que cette capacité soit utilisée dans la production au cours d'une période suivante, cet investissement liant les deux périodes par une relation différentielle entre les forces sociales qui agissent à partir de la division du travail et les relations de l'interdépendance mutuelle, au cours d'une période de production pour que les effets de cette action se manifestent au cours d'une période à venir. La balance du processus dans le temps exige des conditions de proportionnalité dans les échanges entre les grands secteurs de l'économie nationale et les classes sociales au sein de chaque secteur, *des conditions qui ne se réalisent qu'accidentellement et qui font du mouvement du processus économique un mouvement perturbé à travers le temps, un mouvement cyclique.*<sup>4</sup>

c- Le sous-ensemble embrassant *la totalité du processus économique*, en fonctionnement individualisé, morcelé et spontané à travers les forces du marché avec des *aspects négatifs* au point de vue social et le *cadre social organisationnel de toute la vie sociale* : *l'Etat* conçu sous l'angle de son rôle dans la vie économique de la société. Le fonctionnement morcelé du processus économique peut avoir, et effectivement il a des *aspects négatifs* au point de vue social :

- o gaspillage des forces productives: formes différentes du chômage pour la force de travail – non utilisation des capacités productrices matérielles (the excess capacity phenomenon) – inefficacité dans l'utilisation de certaines forces productives – activités économiques nuisibles à la société (production de drogues, des armes interdites, prostitution, commerce des enfants...)
- o une répartition inégale des revenus se faisant au détriment de la majorité de la population qui devient de plus en plus plus inégale avec l'intensification de la polarisation économique sous la forme de la concentration de la richesse économique dans les mains de la minorité.

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<sup>4</sup> Ce sous-ensemble évoque, sur le plan théorique, l'étude de la présentation schématique du mouvement du processus économique sous la forme d'un tableau économique ou un schéma de reproduction : de P. S. de Bois Guilbert (1646-1714) à F. Quesnay (1694-1774), à K. Marx (1818-1883), à L. Walras (1834-1910), à V. K. Dimitriou (1904); au Gosplan soviétique, à W. Leontief, voir M.DOWIDAR, *Les Schémas de reproduction et la méthodologie de la planification socialiste*, Editions Tiers-Monde, Alger, 1964.

- o L'incapacité d'exploiter, dans l'intérêt de la majorité et même en général, les nouveautés scientifiques et techniques *effectivement disponibles* à l'heure actuelle du développement de la société humaine.

Il s'agit, au sein de ce sous-ensemble de la *contradiction* entre le résultat de l'activité économique spontanée au point de vue social et le type de fonctionnement morcelé au point de vue individuel, de la contradiction de la considérer avec le cadre organisationnel de l'ensemble de la société, *l'Etat* et son rôle dans la vie économique de la société (entre les aspects positifs et négatifs (au point de vue de qui?) à la fois de sa présence ou de son absence vis à vis de la vie économique de la société).

**d-** Un autre sous-ensemble concerne les rapports entre le matériel du processus de l'activité économique et le *système de ses mœurs* formulé à travers la pratique économique *capitaliste autour d'un système de valeurs marchand*.

Le comportement des agents économiques, motivés dans l'économie capitaliste par la maximisation du gain monétaire, en général, et du profit monétaire, en particulier, cristallise, avec le développement capitaliste, un système des valeurs marchand autour duquel se dessine un système des mœurs se montrant de plus en plus comme anti-humain au point de vue des conditions de la vie de la majorité. En plus, il affecte à son tour la marche du processus économique en deux sens :

- o en agissant négativement sur l'efficacité de ce processus au point de vue de la société, et
- o en ébranlant les conditions au sein du processus économique dont la morale devient assurée par l'immoral.

Ce système de mœurs de l'économie capitaliste dans son évolution historique peut être présenté comme assemblant :

- une acceptation sans gêne d'une *inégalité economico-sociale* de plus en plus flagrante,
- un approfondissement du *racisme*, sous tous ses aspects possibles, qui ne peut plus être camouflé par des prétentions "démocratisantes" ou par un verbalisme des "droits de l'homme."

- La propagation oppressive de *la violence*<sup>5</sup> sous toutes ses formes : physique, idéologique, psychologique, surtout vis-à-vis de l'autre, et surtout des femmes et des enfants au sein de "cet autre". Cette violence est vulgarisée par *la légèreté par laquelle la force militaire est utilisée par le capital international*, sous des drapeaux variés, souvent alliés, et de plus en plus maintenant sous le drapeau des Nations Unies, dans le but du morcellement des sociétés et de l'éradication des peuples entiers. Cette force est souvent liée à des mafias pratiquant non seulement des crimes internationaux organisés mais aussi la vente à des états capitalistes des services marchands des mercenaires guerriers (de genre Blackwater Co.).
- *La corruption* qui n'épargne aucune institution de la vie sociale et surtout les institutions des Etats et des grandes entreprises privées (individuelles et étatiques). Les pratiques de corruption de toute sorte qui se répandent et deviennent de plus en plus audacieuses, flagrantes et totalitaires. La crise actuelle a divulgué jusqu'au point que la corruption devient monnaie courante dans la pratique du monde des affaires du grand capital, en commençant par les têtes des grandes entreprises capitalistes en faillite; des têtes qui continuent leur pratique frauduleuse même après avoir reçu de l'Etat, au lendemain de leur faillite, les sommes fabuleuses de sauvetage, dans le cadre de l'opération de "la privatisation des profits et la socialisation des dégâts" grâce à la politique charitable des Etats du grand capital.
- Collé au crime international organisé se trouvent, dans le cadre de ce système des mœurs marchandes, l'espionnage et la piraterie informatique: l'essence de cette dernière est de violer l'intimité sociale et psychologique au niveau des individus (par toutes sortes de mesures : de surveillance, d'écoute, d'arrestation, de torture...etc.), des Etats, des régions et finalement au niveau du monde; pratiqué non seulement par les Etats mais aussi par des blocs régionaux qui mondialisent ce type de piraterie.

On a là un système de mœurs qui oscille autour d'un système de valeurs marchand, émanant du mode de comportement des agents économiques éblouis par la course des gains monétaires, mais qui, à son tour, réduit l'efficacité du processus économique, au point de vue non

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<sup>5</sup> Pour le système Européen de piraterie, voir *Le Monde Diplomatique*, Paris, Mars 1999, p. 21. – Pour le réseau mondial d'espionnage des Etats-Unis, voir Niky Hager, *Secret Power, New Zealand's Role In The International Spy Network*, Craig Potton Publishing, Nelson, New Zealand, 1996.

seulement social, mais aussi individuel, puisque la pratique immorale se fait aussi entre les agents économiques eux-mêmes.

2) On a, finalement, les rapports entre *l'ensemble du processus économique*, ayant ce sous-ensemble des mœurs inhumaines, et *l'ensemble de son environnement socio - naturel*, qui ne cesse d'être violé par la pratique économique animée par la maximisation du profit monétaire, *maximisation qui implique que l'entreprise tient toujours à intérioriser toute sorte de bénéfice et à extérioriser toute sorte de coût* afin de maximiser son profit monétaire. S'il arrive que le coût à exclure cause un préjudice à l'environnement l'entrepreneur restera indifférent jetant sur le dos de la société le coût engendré par son activité nocive à l'environnement. Sous la forme historique de la lutte entre l'homme, comme animal "profit-maker", et la nature, l'action marchande de l'homme rend la nature moins humaine avec une perte sans cesse de ses capacités favorables à l'activité socialement productive du travail.

On a là une contradiction qui s'intensifie dans le cadre des rapports sociaux de la production capitaliste, entre la course individuelle à la maximisation du profit monétaire et la conservation de l'environnement naturel en tant que richesse sociale toujours menacée, menaçant ainsi le bien-être des générations à venir. Ainsi, dans cette phase descendante de l'économie capitaliste, la pratique économique marchande quotidienne, au lieu d'humaniser la nature en la rendant plus ami à l'homme, elle la dénature en réduisant ses capacités potentiellement amicales.

Tel est le grand ensemble des rapports sociaux du processus socio-naturel économique, composé des sous-ensembles à l'intérieur même du processus économique et au niveau de ses relations avec les mœurs de l'actuelle économie capitaliste internationale et les relations de cette dernière avec l'environnement.

**V - Pour comprendre la "crise" actuelle de l'économie capitaliste internationale** il faut la prendre dans son mouvement *séculaire* pour voir dans quelle mesure les changements *séculaires* et les changements structurels affectent, dans un contexte *conjuncturel* bien défini, les contradictions au sein du processus de l'économie réelle, soubassement de l'économie financière, pour localiser le domaine de l'éclatement sous l'aspect financier, d'une crise à spécifier en faisant la distinction entre "la crise" comme phase du cycle économique qui caractérise le mouvement de l'économie capitaliste au cours de son étape historique montante et "la crise" historique du mode de production capitaliste. Voyons maintenant cette distinction.

**VI - La loi du développement de l'économie capitaliste à travers les cycles économiques** (les fluctuations économiques, pour certains) est généralement admis. Cette loi implique la *crise* comme une des quatre phases d'un cycle qui se répétait de 1816-1825 jusqu'à la deuxième guerre mondiale, tous les 4-7 ans, avec alternance presque régulière, au cours de sa deuxième phase, entre la déflation et l'inflation. *Il s'agit de la crise dans l'économie capitaliste qui se manifeste par un excès des valeurs d'échanges*, par opposition à la crise dans les économies précapitalistes qui se manifestait par une *pénurie* des valeurs d'usage, surtout les vivres.<sup>6</sup>

1. La *possibilité* de la crise du cycle du capital comme intermédiaire de la reproduction sociale et donc la crise dans l'ensemble de l'économie, *réside* dans :

- a) la séparation dans les temps, dans l'économie *marchande*, entre les *deux opérations nécessaires à compléter un acte d'échange et réaliser l'équilibre pour les opérateurs* (acheter sans vendre à une première phase et vendre sans acheter à une phase ultérieure). Au cours de la période intercalaire des facteurs peuvent intervenir pour empêcher la conclusion de la deuxième opération qui complète l'acte d'échange emportant l'équilibre à tous les échangeurs. Cela se manifeste surtout dans le cycle du capital comme intermédiaire du cycle de la production social, où l'entrepreneur figure sur deux marchés, séparés dans l'espace et dans le temps par le lieu et le temps de la production.
- b) La séparation, dans l'économie marchande *monétaire*, par rapport à un acte économique, entre les *décisions prises en termes monétaires* pour acquérir des marchandises ayant une forme physique et le sort effectif des marchandises physiquement considérées, une séparation qui permet à la monnaie de se manifester en tant que *voile*.
- c) la maximisation du *profit monétaire* comme *objectif immédiat* de la production par le capital-argent, avec la distinction immédiate de la production par le capital-argent, entre capital productif, capital financier et capital commercial, chacun ayant une logique

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<sup>6</sup> Voir, sur la crise dans les économies précapitalistes l'étude lumineuse, surtout sur le plan méthodologique, d'ELMAKRIZI (1364-1445), de son ouvrage "Ighathat al-umma bikachf al ghoulma : Tarikh al maja'at fi misr" (L'histoire des famines en Egypte), (L'édition de Dar Ibn El Walid, Beyrouth, 1956). Et, sur les détails de cette étude, voir, M. H. Dowidar, *L'Economie Politique, une science sociale*, F. Maspéro, Paris, 1974, p. 99-102.

différente dont l'utilisation se heurte à la contradiction entre eux en ce qui concerne l'appropriation du surplus économique. De plus, la tentative de maximiser le profit monétaire prend lieu au sein d'un processus des activités *morcelées* des différentes entreprises dans un cadre social où s'absente la coordination préalable entre les différentes parties de l'activité économique, enveloppée, dans ses différents coins par l'incertitude.

- d) Les conditions de la *reproduction*, créées au cours de la *période actuelle* de production, ne se réalisent qu'à travers des *actes d'échange* sur le marché, avec tout le hasard qui caractérise le marché capitaliste. D'autant plus que les décisions relatives à la reproduction (production, répartition, épargne) doivent être prises d'abord en termes monétaires pour qu'elles soient traduites en forces physiques à utiliser dans la reproduction.

2. C'est au sein d'un tel mode de fonctionnement qui oscille autour de la contradiction salaires-profit que réside *la possibilité de la crise en tant que phase du cycle économique qui caractérise le mouvement de l'économie capitaliste dans le temps dont l'équilibre ne se réalise qu'accidentellement*.

Chaque cycle (avec sa phase de crise) doit être étudié dans son propre contexte historique pour comprendre ses causes directes, la modalité de sa manifestation et de la réalisation de ses effets. Mais à la lumière d'une *théorie* de développement de l'économie capitaliste, une théorie qui cherche à expliquer le pourquoi du mouvement cyclique (le pourquoi de la nature hasardeuse de balance), les contradictions qui l'évoquent, la modalité de ses manifestations en général et en spécifique pour chaque cycle économique avec sa phase de crise, et, finalement le processus historique qui fait que le développement historique du mouvement cyclique amène à la crise historique du mode de production capitaliste.

3. Si le mouvement de l'économie capitaliste se fait, surtout à son étape historique montante, à travers le cycle économique, le développement séculaire de cette économie *implique un développement du cycle économique lui-même vers "une crise" historique de l'ensemble du mode de production capitaliste*. Cette "crise" est en manifestation permanente par une série de cycles de type différent. L'étude de cette "crise" ne peut être, à notre avis, éclairante qu'à travers *une méthodologie historique tri-dimensionnelle* :

- étude du mouvement *séculaire* de l'économie capitaliste au cours du vingtième siècle.
- étude des changements *structurels* au cours des dernières trois décades.
- étude de la *situation conjoncturelle* dans l'économie internationale autour de l'économie américaine.

## **Chapitre 2 : L'étude de la crise de l'économie internationale contemporaine**

Cette étude se fait par quatre démarches :

I : Etude du mouvement séculaire de l'économie capitaliste au cours du 20<sup>ième</sup> siècle,

II : Etude des changements structurels au cours des dernières trois décades,

III : Voir les effets du mouvement séculaire et des changements structurels sur l'ensemble socio – naturel économique à travers les effets sur ces sous-ensembles.

IV : Etude de la situation conjoncturelle autour de l'économie américaine au cours de la décade actuelle.

### ***I - Le mouvement séculaire de l'économie capitaliste au cours du 20<sup>ième</sup> siècle :***

1- La fin du 19<sup>ième</sup> siècle et le début du 20<sup>ième</sup> siècle témoignent une *tendance séculaire* vers la concentration et la centralisation du capital avec le triomphe potentiel du capital financier en ses rapports avec les autres formes du capital, grâce à la manipulation du système bancaire de la création de la monnaie, surtout de la monnaie bancaire (la monnaie de crédit) qui devient dans la période à venir la forme dominante de la circulation monétaire.

2- La *concentration du capital* signifie un mouvement de polarisation économique qui ne cesse pas de s'aggraver : la richesse économique se concentre dans les mains d'une classe sociale d'un nombre relativement très limité en relation avec les autres classes sociales et surtout les salariés. Cette polarisation continue s'accélère vers la fin du 20<sup>ième</sup> siècle.



·US (en 2007) :  
20% de la population possède  
83% de la richesse économique.

·Au niveau du Monde (en 2000) :

	No.de population (en millions)	% dans la richesse économique
Asie	2064 (61%)	25.1%
Afrique	762 (12%)	2.9%
Amérique latine et centrale	500 (8.5%)	7,1%
Europe+Russie	728 (12.2%)	22.6%
Etats-Unis	201 (5.1)	28.8%

3- A cette polarisation croissante de la richesse économique s'associent le chômage des travailleurs, le pouvoir politique de la classe de la richesse et la corruption pour que la part relative de la majorité de la population dans le *revenu* national soit relativement limitée. D'où un *pouvoir d'achat* relativement limité qui peut devenir encore plus limité à travers la manipulation *des prix* qui affectent négativement les revenus réels des autres classes sociales.

·US (en 2007)  
1% de la population reçoit 20% du revenu national annuel

·France (fin des années 1990)

	% en propriété de la richesse économique	% dans le revenu national
- Le plus élevé 20% de la population	68.87%	42.85%
- Le 20% suivant	19.19%	22.19%
- Le 20% suivant	9.17%	15.99%
- Le 20% suivant	2.22%	10.96%
- Le 20% au plus bas	0.55%	6.1%

·Répartition des revenus au niveau du monde.

	(1992)	(1994)
- Le 20% le plus riche	82.7%	84.7%
- Le 20% le plus pauvre	1.4%	1.1%
- Le plus pauvre au plus riche est 1:74 pour l'économie mondiale.		

4- La *centralisation du capital* signifie la tendance vers la *monopolisation de la richesse économique sous la forme des entreprises économiques* dans les différents domaines de l'activité économique au sein de la classe qui possède la richesse économique. La domination de la forme monopolistique signifie :

- La possibilité de la *manipulation des prix*, surtout quand le taux de profit est menacé par la lutte salaires-profit, en les poussant vers la hausse. D'où une *tendance séculaire inflationniste* ne devenant possible qu'avec l'abandon de l'étalon monétaire or,
- la possibilité de *limiter la quantité produite* afin de limiter l'offre en vue du contrôle du prix, aggravant ainsi le mouvement inflationniste,
- limiter la quantité produite signifie laisser une partie de la capacité productrice sans utilisation, d'où l'apparition du phénomène d'*Excess capacity*: une bonne partie de la capacité productrice *déjà existante* reste non-utilisée, ce qui représente un gaspillage pour la société, mais un moyen de soulever le profit pour l'entreprise privative.

5- Au sein de cette tendance monopolistique/ inflationniste/ séculaire, se montre particulièrement axial *le monopole des entreprises monétaires* : les banques (ayant la forme juridique de sociétés anonymes): elles monopolisent le marché monétaire: le marché de la création de la monnaie, surtout la monnaie de crédit qui devient la forme dominante de la monnaie et dont la création devient une source principale des profits bancaires. Ainsi :

- Le système bancaire, devenu monopolistique (ou oligopolistique) *monopolise la création de la monnaie* (et celui qui monopolise la création de la monnaie peut s'approprier une partie du surplus économique sans contrepartie).
- Le système bancaire monopolistique *contrôle la masse monétaire* en circulation, et donc la possibilité d'influencer les prix des marchandises produites par l'activité de l'économie réelle.

6- La tendance monopolistique et inflationniste et la possibilité que le monopole bancaire affecte les prix mènent à la possibilité de diminuer *la part relative* du revenu réel des salaires et des traitements à travers *les changements des prix vers la hausse*, ce qu'on appelle "la re-répartition des revenus à travers le changement des prix": si la tendance générale des prix

est inflationniste nous trouvons une tendance vers la réduction de la part relative du *revenu réel de la majorité* de la population. Ce qui signifie la limitation relative de leur pouvoir d'achat et donc la limitation relative de leur demande pour les marchandises produites au sein de l'économie réelle. C'est l'aggravation de la contradiction sous-consommation/surproduction autour de la propriété privative monopolistique des moyens de production et la modalité définitive de la répartition des revenus, et, par conséquent l'étranglement relatif du marché "national" (d'où la lutte croissante pour le marché extérieur).

7- Le monopole du système bancaire en tant *qu'ensemble* d'entreprises capitalistes lui permet de *contrôler le capital-argent* et de manipuler *le processus de son allocation* entre les différents domaines de l'activité économique à partir du souci de la maximisation du profit *financier* :

- Vers l'activité de la *production réelle* (produisant ce qui satisfait les besoins) qui implique un cycle long avec les risques rencontrés sur les marchés des inputs avec les forces sociales au sein de l'entreprise et sur le marché d'output,
- Ou bien vers *l'activité financière* qui peut réaliser un profit financier à travers un cycle bien court du capital qui permet une reproduction rapide du cycle. Ici, c'est la logique du capital financier qui décide.

8- Avec la concentration et la monopolisation du capital s'aggrave la contradiction sous-consommation/surproduction au sein de l'économie réelle avec le rétrécissement *relatif* du pouvoir d'achat de la majorité et donc de la demande effective pour les marchandises *déjà* produites. Ce rétrécissement relatif du marché interne, provoquant une lutte monopolistique farouche pour le marché externe, rend le domaine de la production réelle moins attirant au point de vue du capital financier. Moins du capital-argent créé dans le domaine bancaire sera orienté vers l'économie réelle. La situation sera encore plus grave pour cette économie s'il existe à l'extérieur des possibilités de placer du capital-argent dans des domaines de production réelle à coût bas à l'extérieur.

Et le capital financier cherche à surmonter la contradiction, manque relatif de demande/surproduction par un détour : maximiser le profit financier tout en sachant que la valeur réelle réside en sa capacité de capter une partie du surplus économique : Mais cela se fait au détriment d'un capital-argent additionnel à orienter vers l'économie réelle. Ainsi, la créature s'éloigne de son créateur qui peut, avec le temps, dans l'extase de

son jeu spéculatif, le menacer dans son existence même ; au moins par une forme d'une *stagnation réelle*.

9- Dans le cadre de cette tendance séculaire, inflationniste, avec le rétrécissement relatif de l'économie réelle, surtout par rapport aux capacités des forces productives, humaines et matérielles, déjà existantes, *la nature du cycle économique est changée qualitativement* comme modalité du mouvement du processus économique dans le temps : au lieu de se dérouler par une succession régulière: expansion, crise, dépression et reprise comme il le faisait jusqu' à la 2<sup>ème</sup> guerre mondiale, il commence à *réunir ensemble les deux tendances contraires: l'inflation et la stagnation : l'inflation monétaire avec sa tendance séculaire avec la stagnation réelle qui va avoir elle aussi une tendance séculaire*. Depuis la fin des années 1960 la situation se caractérise par l'existence simultanée de l'inflation avec le chômage pour la force de travail et la non-ou-la-sous-utilisation d'une bonne partie de la capacité productrice matérielle.

10- Avec ce changement qualitatif du cycle économique dans le cadre du mouvement séculaire de l'économie capitaliste internationale, *l'Etat capitaliste se trouve perturbé* : après avoir adopté depuis le début des années 1930 une sorte de politique économique keynésienne : essayer de remédier la situation de dépression par des mesures particulières quand elle est là, et remédier l'inflation par d'autres types de mesures quand elle se manifestera à sa phase du cycle économique, alors l'Etat se trouve devant l'existence des deux au même moment. Les mesures que l'Etat peut prendre pour atténuer l'inflation peuvent causer l'augmentation du chômage et vice versa. Cette perturbation de la politique économique de l'Etat capitaliste sera accentuée par :

- L'augmentation de l'interaction entre le national et l'international dans la composition de la demande totale nationale, surtout avec le nouveau "pattern" de division internationale du travail guidée par les sociétés transnationales, avec la nouvelle forme de l'internationalisation de la production qu'il implique ;
- Elle sera perturbée aussi par le développement du mouvement de la classe ouvrière dont les organisations syndicales et politiques ont un mot à dire dans la détermination de la politique économique.

Vers la fin des années 1980, la politique économique des Etats capitalistes développés bascule moins : le choix, veiller à la stabilité des prix internes pour assurer une compétitivité sur le marché international même en sacrifiant la création des emplois pour les travailleurs en chômage. Le taux de chômage commence à hausser.

11- Pour conclure, en ce qui concerne la tendance séculaire du mouvement de l'économie capitaliste au cours du 20<sup>ème</sup> siècle :

Avec la *concentration* continue de la richesse économique dans les mains d'une minorité de plus en plus rétrécie et le "pattern" de la répartition des revenus qui en découle s'accroît, avec le développement des forces productives, humaines et matérielles, la contradiction structurelle du processus économique réel sous-consommation/surproduction: le pouvoir d'achat de la majorité, et avec lui leur demande, se rétrécissent par rapport à la capacité productive des forces productives, produisant ainsi une étroitesse relative du marché interne. D'où le pari sur le marché international. La lutte pour ce dernier s'accroît entre les capitaux dont les plus puissants mènent une guerre acharnée pour assurer une hégémonie sur ce marché. D'où la tendance vers *une stagnation* qui se manifeste vers la moitié du siècle exprimant une tendance qui se veut séculaire.

- *La monopolisation* de la vie économique autour de la monopolisation du contrôle du capital sur les forces productives, humaines et matérielles, produit à la fois une *possibilité de manipulation des prix vers la hausse* (abandon nécessaire de l'étalon-or monétaire) et une possibilité que le système bancaire, contrôlé par le monopole financier, *monopolise la création de la monnaie*, surtout la monnaie de crédit. Ce qui lui permet la possibilité de *contrôler la masse monétaire* en circulation, et donc de manipuler les prix. D'où une tendance séculaire inflationniste.
- Avec ces tendances séculaires se change qualitativement la nature du cycle économique qui continue des manifestations différentes au sein de la tendance séculaire : *l'inflation s'associe à la stagnation*. L'existence simultanée de deux tendances perturbe la politique économique de l'Etat capitaliste.
- La possibilité que *le capital financier*, avec sa logique particulière, monopolise, à travers la monopolisation de la création de la monnaie, *le processus de l'allocation du capital-argent* entre les différents domaines de l'activité économique, réelle, monétaire et financière, tend, par conséquent, devant les difficultés accrues de réaliser un taux élevé du profit au sein de l'activité économique réelle accablée par la contradiction sous-consommation/surproduction, nous disons que le capital financier *tend à orienter* le capital-argent de plus en plus vers une activité financière *qui s'éloigne graduellement de sa base économique réelle*. *La presque dichotomie entre le capital financier et son origine réelle est*

*assurée*, produisant un lieu de lutte entre les capitaux, non seulement farouche mais surtout *plus hasardeuse*, une lutte entre des capitaux qui abandonnent le centre réel de la vie économique pour survoler dans des cieux de plus en plus hauts par rapport à ce centre.

## **II- La deuxième démarche de la méthodologie de l'étude de la "crise" : Voir les principaux changements structurels de l'économie capitaliste au cours des dernières trois décades :**

1- *Le premier changement structurel* se réalise par la cristallisation d'un "pattern" de division internationale du travail guidé par les sociétés transnationales :

a. *la transplantation de la division du travail appelée "technique" qui caractérise l'entreprise capitaliste au niveau de l'économie internationale.* Ainsi, le "travailleur collectif" de l'entreprise capitaliste se voit confronté au niveau de l'activité économique de l'économie internationale :

- à une nouvelle forme de *l'internationalisation de la production* qui élargit l'étendue du "travailleur collectif" : "le travailleur collectif international"
- à l'intensification de relations de l'interdépendance technique entre les économies composant l'économie internationale
- à une vitesse plus grande de la fusion des effets d'un événement d'une économie aux autres économies.
- cette nouvelle forme de l'internationalisation de la production est consolidée par le progrès énorme de l'informatique et de la communication.

b. Il s'agit d'un "pattern" de division internationale du travail *guidé par des sociétés transnationales*, des grands monopoles habituellement groupés dans des groupes financiers gigantesques :

- La STN se caractérise par une taille très grande (au point de vue investissement, force de travail, investissement étranger direct, sa part dans le produit international et dans le commerce international).
- elle remplace le commerce avec les autres par la production chez eux. Elle élabore une stratégie de développement et planifie au niveau de l'économie internationale.
- elle favorise des relations conflictuelles non seulement avec l'économie mère mais aussi avec l'économie hôte.

- elle représente un sujet économique puissant au sein de l'économie internationale, souvent plus puissant que beaucoup d'économies sous-développées.

Les places transnationales financières bénéficient de l'unification du marché financier international et de la liberté du mouvement du capital financier ainsi que de l'élargissement des domaines de son action :

- Soit sous la forme d'un investissement étranger direct (surtout au point culminant de la crise),
- Soit sous la forme du "capital volant" à court terme, spéculant sur les "valeurs" immobilières entre les différents coins du marché financier international,
- Soit en intensifiant la fièvre spéculative sur les marchés de change et les marchés des sécurité (représentatifs et dérivés).

2- *Le deuxième changement structurel est relatif au processus de l'introduction de nouvelles technologies* au sein de l'activité économique, en général et de l'économie réelle, en particulier, d'une phase du développement capitaliste où les avantages relatifs à l'échange international se réalisent par *l'introduction des innovations techniques en première*. Il s'agit d'une troisième révolution technologique qui *électrifie la vie économique*, économisant le marché de l'emploi à un rythme qui peut faire croire que la force de travail actuellement disponible devient de plus en plus superflue par rapport aux besoins de l'accumulation du capital selon la modalité et le rythme permis par le cadre organisationnel actuel de ce processus. La lutte monopolistique sur le marché international accélère le rythme des changements technologiques. Résultat : augmentation du taux de chômage un peu partout dans le monde et apparition de nouvelles formes de l'aliénation de la force de travail : marginalisation, exclusion sociale, *élimination des travailleurs du marché de travail* bien qu'on soit en pleine vitalité productive. L'accélération du rythme des changements technologiques pour faire face à la concurrence monopolistique peut perturber le fonctionnement harmonieux du "travailleur collectif" en général et du "travailleur collectif international" en particulier, *affectant négativement la productivité relative de ce travailleur par rapport au coût de l'introduction de nouvelles techniques de production*. Sur le plan social, ce processus des changements technologiques participe non seulement à l'exclusion sociale des membres de la classe ouvrière mais aussi à la dispersion de la classe moyenne.

Cela amène à une réduction des salaires et des traitements dans le revenu national au moment où les systèmes de la sécurité sociale sont en effritement graduel. On a, enfin, un manque relatif du pouvoir d'achat de la majorité (par rapport à ce qui est effectivement produit dans le domaine de l'économie réelle.)

*3- Le troisième changement structurel de l'économie internationale s'impose au cours de la 1ère moitié des années 1970. C'est l'effondrement du système monétaire international de Bretton-Woods :*

- Avec la première manifestation monétaire de la crise structurelle de l'économie internationale sous l'hégémonie du capital américain, les Etats-Unis se trouvent à la fin des années soixante menacés par l'épuisement du stock en or qui soutient la relation entre le U.S. dollar et l'or fixée en 1934 par un engagement juridique du gouvernement des Etats-Unis. Ils rompent cette relation entre le US\$ et l'or, arrêtant ainsi l'obligation de changer le dollar en or à un prix fixe.
- Mais, le dollar reste grâce à la puissance de l'économie américaine, à l'hégémonie du capital américain et à son contrôle sur les organisations économiques internationales (la banque mondiale et le fonds monétaire international), la monnaie internationale. Mais, dans un marché international de change qui perd sa caractéristique principale : c'est ce qui explique la tendance de la stabilité des taux de change entre monnaies nationales, le marché sera dominé par l'instabilité de ces taux avec flottement de toutes les monnaies comme règle générale. Mais, cela ne représente qu'un mécanisme de fonctionnement.
- Puisque l'instabilité des taux de change des monnaies pousse à la séduction de la spéculation : réaliser le profit financier en faisant le commerce des monnaies, réaliser des "Windfall profits" des différences des prix des monnaies, dans le temps ou dans l'espace.

Le change des monnaies devient, après avoir été un moyen pour réaliser l'échange international des marchandises, un but en soi, pour réaliser un profit financier.

- Avec l'accroissement du nombre des états et l'expansion du commerce international, la spéculation sur le marché de change devient une activité monétaire/financière lucrative, dont le volume se multiplie chaque jour sur le marché international. Et l'instabilité



des taux de change devient le mécanisme pour que la spéculation devienne le mode de comportement principal sur le marché de change international.

- L'étendue de ce mode de comportement s'élargit dans le cadre organisationnel visant à l'unification du marché financier international selon les règles de l'accord de Bretton Woods en 1944. Dans ce cadre-là un tel mode de comportement spéculatif aurait été irréalisable.
- Ce mode de comportement devenant axial pour le capital financier s'est avéré de façon contagieuse : il s'éparpille dans tous les coins du marché financier international : à la bourse traditionnelle, surtout dans son "second market" de sécurités ce qui fortifie l'autorité du capital financier (qui détient la clé du capital-argent). Ce mode spéculatif s'enracine dans le fait que l'incertitude représente la caractéristique historique dominante de l'économie marchande capitaliste
- Avec le contrôle du capital financier sur les deux marchés, de change et de sécurités, il ne sera jamais rassasié, cherchant toujours à élargir le champ de son activité spéculative, vers *les sécurités dérivées*, qui deviennent objet de spéculation presque sans limite dans un des coins du marché financier : le marché des dérivés : et par là s'achève l'aliénation du capital financier.
- Avec la spéculation devenant le mode de comportement général sur les marchés de change et les marchés financiers internationaux, s'amplifient les volumes des transactions sur ces marchés à des niveaux à côté desquels les réserves des banques centrales des Etats se trouvent peu utilisables. Et ces banques commencent à perdre leur autorité dans le domaine des politiques monétaires et commerciales, surtout vis-à-vis des entreprises financières monopolistiques et gigantesques dans la mer troublée du marché financier international.

Pour se faire une idée du développement des marchés financiers par rapport à la base d'économie réelle, prenons des chiffres relatifs au moyen des transactions quotidiennes de l'économie internationale pour l'année 2007 (en milliards du US\$):

120 m.\$	1580m.\$	4300m.\$
Transactions à la bourse	Transactions au marché de change	Transactions dans les dérivés

120 m.\$  
Produit réel

Le total des transactions sur l'ensemble du marché financier =

$$120 + 1580 + 4300 = 6000 \text{ m.}\$$$

Rapport, réel : financier  
1 : 50

A cela s'ajoutent \$ 360 m., le volume de crédit sur le marché monétaire.

*4- Le quatrième changement structurel de l'économie internationale au cours des trois dernières décades se présente dans le changement continuuel de la structure de l'économie internationale des changements :*

Dans les industries "Leading" et l'endroit de leur localisation – des dislocations des industries à travers les frontières des pays, pour des raisons économiques et pour des raisons en rapport avec l'environnement.

- L'émergence des forces économiques nouvelles, productives et financières ou financières seulement (les pays du Golf).
- Dans le comportement des grandes puissances économiques internationales, surtout les Etats-Unis (comportement économique, politique et militaire).
- La désintégration du Tiers-Monde et l'approfondissement du sous-développement dans la plupart de ces pays devenant donc plus vulnérables par la réintégration nuisible à l'économie capitaliste internationale.
- Dans le cadre organisationnel de l'économie internationale : tentatives d'unifier le marché financier – déclin du BIRD et du FMI et désarroi de l'Organisation Mondiale de Commerce.
- Des tentatives d'intégration économique régionale (en Europe, Asie, Amérique du Nord, Amérique Latine et Afrique) :
  - Les tentatives du capital monopolistique de réunir ses forces au sein d'un marché plus étendu pour augmenter sa compétitivité sur le marché international.

- Des tentatives d'intégration qui commencent par l'économie avec l'espoir d'un succès politique (Union Européenne, e.g.)
- Des tentatives d'intégration par les gouvernements dont le peuple reconnaît les menaces de leurs intérêts, donc un rejet politique par le peuple.
- La militarisation des relations internationales par les Etats-Unis pour atteindre des objectifs économiques.

Tous ces changements de la structure de l'économie internationale créent un monde d'incertitude avec beaucoup de risques.

5- *Associé à ces changements structurels*, le capital international, représenté par les sociétés transnationales, déclare le néo-libéralisme économique comme son slogan idéologique. Bien que le capital américain affiche ce slogan et presse les autres pour que leurs états s'éloignent de la vie économique, *l'Etat américain adopte une politique économique interventionniste, comme nous le verrons plus tard.*

**III- La troisième démarche de la méthodologie de l'étude de la "crise" :** *les effets de ce type de mouvement séculaire de l'économie capitaliste et des changements structurels au cours des trois dernières décades sur la modalité du fonctionnement équilibré de cette économie.* Ici, nous faisons la distinction entre :

- des effets économiques directs des déterminants du pouvoir d'achat sur la majorité de la population, et
- les effets sur la modalité du fonctionnement du processus économique à travers les ensembles (et sous-ensembles) des relations de ce processus.

1- Les effets économiques directs : l'accentuation de la contradiction entre sous-consommation/surproduction et la concentration interrompue du capital ( "pattern" de répartition des revenus de plus en plus inégaux), la monopolisation à outrance du processus économique (limitation du taux de l'utilisation des forces productives; manipulation des prix et de la masse monétaire; effets sur les salaires réels ) et le rythme accéléré des changements technologiques ( avec son effet négatif sur l'emploi de la force de travail ), toutes ces tendances se réunissent pour que le pouvoir d'achat de la majorité de la population soit insuffisant pour garantir un niveau de demande qui absorbe le produit social. Il s'agit là de la demande de la majorité pour les biens de la consommation et la

demande des petites et moyennes unités de production (surtout quand on a encore des unités paysannes ou artisanales – ou bien encore des unités du secteur "informel") pour les biens de la production : se manifeste ici avec acuité non-précédée le phénomène de *l'insuffisance séculaire* de la demande *actuelle* pour réaliser l'équilibre par rapport au produit social déjà produit. D'où la nécessité de compléter cette demande. Puisque les revenus monétaires actuels de la majorité (déterminés par le degré de la polarisation économique) ne peuvent pas remplir la lacune, on fait recours à leurs revenus futurs. *Le pari est fait sur les revenus monétaires futurs de la majorité* : acheter aujourd'hui, mais payer en plusieurs versements dans l'avenir. Et pour ce faire, le motif de profit monétaire fournit le moyen : le crédit sera avancé par les entreprises qui font le commerce de la monnaie, les banques, qui avancent du crédit à intérêts que les acheteurs des marchandises rembourseront par versements alimentés par leurs *revenus futurs*. En attendant, l'achat des marchandises réalise le profit monétaire de l'entreprise qui les produit, et une partie du surplus créée au sein de cette entreprise revient au capital financier, qui avance le crédit qui permet de conclure la transaction sous la forme d'un intérêt monétaire. Le nombre des partenaires de l'affaire se multiplie :

- des entreprises qui produisent les marchandises et paient les salaires en monnaie, pour le profit monétaire,
- des entreprises commerciales qui trouvent des clients pour le profit commercial monétaire (profit d'aliénation).
- des entreprises financières prêtes à avancer le crédit et cherchant à le commercialiser pour le profit financier.

Le domaine de ce phénomène s'élargit dans le domaine de l'achat des biens de consommation durables, donc de l'habitat, pour les consommateurs ; et les biens d'équipement, pour les petites et les moyennes unités de production. Au cours de la pratique économique des opérations cristallisent les instruments juridiques : "the hire purchase contract" pour les biens de consommation, et "the leasing contract" pour les équipements de production.

Ce mécanisme, par lequel les individus (et les familles) peuvent acquérir les marchandises malgré l'insuffisance de leurs salaires et traitements monétaires actuels :

- permet aux entreprises de production de commercialiser le produit actuel malgré l'insuffisance du pouvoir d'achat de la majorité.

- permet aux entreprises bancaires et financières de réaliser un profit financier en avançant le crédit nécessaire à la conclusion de la transaction.
- pousse les individus, avec le temps, à prendre impulsivement les décisions des achats de consommation, même au-delà de leur pouvoir d'achat actuel. Ce qui peut amener à une sorte de "*consommanie*" qui empêche les individus d'épargner, en hypothéquant toujours leurs revenus futurs. La plupart des *Américains* se trouvent actuellement dans une situation pareille.
- peut restreindre la liberté d'action des classes ouvrières et moyennes quand elles sont appelées à faire une grève revendicative, car, étant endetté de tous les côtés, le travailleur hésiterait beaucoup avant de se décider à participer à la grève. Cela peut réduire le militantisme des ouvriers.
- facilite à l'Etat d'adopter une politique du gel des salaires monétaires, malgré la hausse des prix. Car, ayant toujours accès, par le crédit, aux marchandises qu'ils veulent acquérir, les individus payent moins d'attention au niveau de leur revenu monétaire (le gouvernement des Etats Unis a pu geler les salaires des 1997 à 2007, malgré la hausse des prix de l'énergie et des produits alimentaires).

2- Les effets sur la modalité du fonctionnement du processus économique à travers les ensembles (et les sous-ensembles) des relations de ce processus :

a) Pour le sous-ensemble des relations au sein du "travailleur collectif", la rapidité des changements technologiques dictée par la lutte entre les grands monopoles réduit la productivité relative du "travailleur collectif", surtout avec l'expansion de son domaine pour qu'il dépasse les contours nationaux avec la nouvelle forme de l'internationalisation de la production et la pratique de "merging" regroupant au sein d'un seul "travailleur collectif" des ouvriers de plusieurs nationalités ayant des différentes appartenances sociales et culturelles. Ainsi se réduit la productivité du "travailleur collectif" par rapport au *coût social* de la production de la technologie et la durée de son utilisation (un coût supporté non seulement par la grande entreprise ayant son centre de recherche technologique, mais aussi à travers les dépenses publiques sur l'éducation et les recherches scientifiques et technologiques. On a là un *rétrécissement relatif du produit social réel par rapport aux coûts sociaux*.

A cela s'ajoute l'effet de la limitation de la part relative à la majorité dans le pouvoir d'achat réel créée au sein de l'économie réelle, limitation provoquée par le "pattern" de la répartition des revenus (+ la modalité du mouvement du niveau général des prix) défini par le type de concentration et de centralisation du capital.

Ces deux tendances, devenues séculaires, accentuent la contradiction sous-consommation/surproduction, limitant de plus en plus la *réalisation du profit monétaire* au niveau de la commercialisation (d'où la nécessité de consacrer une partie croissante des forces productives, non pas pour produire davantage, mais pour écouler ce qui a été déjà produit : gaspillage au point de vue social de cette partie des forces productives. On constate comme règle séculaire la sous-utilisation des forces productives existantes, en plus d'une efficacité limitée dans l'utilisation de ce qui a été utilisé. Ce qui fait un rétrécissement relatif au mouvement du processus économique.

b) Pour l'ensemble des relations du processus économique au niveau macro-économique, avec l'intensification de la contradiction sous-consommation/surproduction, l'insuffisance de la demande totale effective devient chronique. Cela pousse aux tentatives d'élever le niveau de la demande totale par :

- l'expansion du crédit à avancer aux individus en tant que consommateurs et propriétaires des petites et moyennes unités de production : combler la demande actuelle en escomptant sur les revenus futurs, et
- par l'orientation vers l'économie financière : l'inclusion au sein de l'économie des pyramides plus grandes que les pharaoniques, des *transactions* hautement spéculatives, qui portent sur des "papiers", des sécurités qui n'impliquent, en fin de compte, que l'insécurité, introduit une "suprastructure" pyramidale qui pèse très lourdement sur la base réelle. Et, les forces productives employées dans l'activité financière deviennent un poids parasitaire qui réduit la capacité créatrice du réel : plus de rétrécissement du produit de la base économique par rapport aux forces productives existantes.

c) Pour l'ensemble des relations relatives au processus économique par rapport à son cadre organisationnel social, l'Etat, avec la monopolisation du processus économique, rétrécit le domaine de l'intervention de l'Etat dans la vie économique, réduisant ainsi la part relative à la demande publique de la demande totale. Cela se fait au moment de l'intensification de la division internationale du travail ce qui augmente l'interaction grandissante entre la demande intérieure et la demande extérieure, qui

accroît à son tour le rôle du hasard, déjà incontrôlable, avec l'absence d'une coordination préalable au niveau du social, dans la réalisation des conditions de l'équilibre du processus économique dans son fonctionnement dans le temps. Même, quand il s'agit d'une nécessité pour que l'Etat intervienne, *l'existence simultanée de l'inflation au sein de la stagnation* réduit terriblement l'efficacité de ses mesures d'intervention devenant plus hasardeuses.

d) Au niveau des relations entre le mode de comportement de l'entreprise économique capitaliste (individuelle et étatique) et *le système de mœurs*, produit capitaliste historique autour d'un système de valeurs marchand, la pratique économique courante dans tous les coins de l'économie internationale montre comment un tel comportement devient un fardeau menaçant tout espoir chez la majorité de la population du monde à une vie sociale décente, saine, cultivée et sécurisante, c'est-à-dire, vraiment humaine.

e) Finalement, tous les maux dont souffre *l'environnement socio-naturel* des effets de la modalité du fonctionnement inéluctablement désordonné, bien connus, *réduisant les capacités actuelles et potentielles des forces productives naturelles, directement ; et indirectement des forces productives humaines* subissant l'atrocité d'un environnement violé par toutes sortes de pollution produite grâce à "la main invisible" par laquelle l'entreprise capitaliste arrive à maximiser son profit monétaire. Le malheur est que les intérêts des grands monopoles imposent sur l'Etat du point de vue formel et effectivement de ne pas prendre des mesures efficaces pour sauvegarder l'environnement si les mesures de protection sont susceptibles de nuire à leurs intérêts: l'affaire montre à quel point le mode de production capitaliste devient, dans une grande mesure, historiquement destructif pour le potentiel économique de la société humaine.

#### **IV- La troisième démarche de notre méthodologie est celle de l'étude de la situation conjoncturelle :**

L'économie américaine qui guide l'économie capitaliste internationale, guide, en tant *qu'économie des rentiers* en ses relations avec le reste des économies qui constituent l'économie capitaliste internationale, le fonctionnement en crise du mode de production capitaliste. Pour voir comment nous tâcherons de saisir :

- la place de l'économie américaine dans l'économie capitaliste internationale,
- la trajectoire de cette économie au cours des dernières décades.

- Le lieu particulier de l'éclatement de la manifestation financière de la "crise".

### **1 - L'économie américaine dans l'économie internationale :**

- La plus puissante économie dans le monde (au moins jusqu'à l'éclatement financier de la "crise") :
  - un grand continent, richesse des ressources variées.
  - une seule entité économique et politique (jusqu'à maintenant l'Europe perd par "la politique" ce qu'elle gagne par "l'économie").
  - Réception sélective continuelle d'une force de travail formée par les autres sociétés (qui supportent les coûts de la formation sans récolter des fruits),
  - Epargne des effets destructifs des guerres, surtout des deux guerres mondiales (1914 -1918 & 1939 - 1945).
- A partir de Bretton-Woods (1944) le US dollar est la monnaie des monnaies (secondé par l'or jusqu'à 1971-1973) – ayant une acceptation générale, interne et externe – base d'évaluation internationale de beaucoup de marchandises stratégiques – monnaie de réserve pour la plupart des pays.
- La situation du US \$ permet à l'économie américaine :
  - délimiter l'inflation interne (éveillée par le financement par les déficits budgétaires) et l'exporter vers l'extérieur,
  - d'importer de l'extérieur en payant en US \$ ( par une promesse de paiement) sans contrepartie en exportation réelle,
  - aux Etats-Unis d'effectuer ses dépenses à l'extérieur ( militaires et autres ) sans exportation réelle ( en payant en US \$ ),
  - aux grandes économies transnationales américaines d'investir à l'étranger, payant en dollar, sans exportation réelle ( créer et acquérir des capacités productrices à l'extérieur ),
  - surtout quand la valeur du US \$ baisse par rapport aux autres monnaies, rendre les opportunités d'investissement en US \$ plus attirantes ( orientation des capitaux vers l'investissement interne, création de nouvelles capacités productives )
  - aux Etats-Unis de regrouper les épargnes des autres économies qui accumulent leur réserve internationale en US \$ et la placent dans l'achat des bons de trésor du gouvernement des Etats Unis.
  - Cette situation permet, donc, aux Etats-Unis d'importer sans exportation réelle surtout *les biens de salaires*, les biens consommés par les salariés dont la nature et les quantités



changent avec le changement du niveau de vie, surtout s'ils sont relativement bon marché. Cela rebalance, en partie, la hausse des prix internes de certains biens de salaires (comme l'énergie et l'alimentation); ce qui permet à limiter l'augmentation des salaires avec l'augmentation de la productivité de travail, ou même geler les salaires monétaires pour un certain temps (e.g. le gel des salaires en EU entre 1996 – 2007), avec l'effet positif sur le taux de profit qui donne un facteur de plus pour tirer le capital étranger vers l'investissement aux EU.

- Les Etats Unis disposent d'un système bancaire et d'un marché financier qui sont les plus grands au monde. En mettant en considération que c'est le marché financier international qui est jusqu'à l'éclatement financier de la "crise" le marché international vraiment sans restrictions ou presque, où se trouvent les deux grandes organisations financières internationales : la Banque Mondiale et Le Fonds Monétaire International dominés par les Etats-Unis, avec une faiblesse croissante de leur situation durant la dernière décennie (beaucoup de pays ont cessé de composer avec eux).
- Pour l'investissement étranger direct (la création d'une nouvelle capacité productive) ou l'investissement indirect (par intégration ou acquisition), les Etats-Unis ont :
  - la part relative la plus grande dans les investissements venant de l'extérieur, et
  - la part relative la plus grande des investissements réalisés à l'étranger,
  - ils imposent des restrictions sur la possession des projets de l'infrastructure matérielle par des investissements étrangers, et même des entreprises de production vitales.
- Dans ce cadre le capital américain arrive donc :
  - à s'orienter vers l'investissement à l'extérieur où la force de travail (ou l'énergie ou la matière première) est bon marché; où se trouve le marché qui élimine le coût de transporter la marchandise des Etats-Unis (aussi bien que le coût de l'assurance), et, où en plus s'absentent les lois organisant les relations de travail,
  - à polariser le capital étranger vers l'investissement interne, ajoutant au taux de l'investissement matériel en utilisant les épargnes des autres,
  - à importer le capital étranger surtout dans les domaines de la haute technologie qui augmente la productivité de travail et à

obtenir ainsi un avantage concurrentiel dans l'échange international,

- à importer des biens de salaires moins chers pour la classe ouvrière et la classe moyenne pour garantir la continuité de la limitation de la part relative de ces classes dans le revenu national, part relative qui diminue avec la polarisation économique (centralisation de la propriété et du contrôle effectif sur la richesse économique) et la monopolisation de l'activité économique.

Ainsi s'incline la majorité fortement vers la consommation (consumption addicted), et pour accroître leur demande des biens de consommation (pour compenser le manque relatif à leur pouvoir d'achat), le capital financier se hâte à prêter aux individus des prêts de consommation, y compris l'achat des habitations, escomptant sur le revenu monétaire futur : l'achat de la croissance actuelle en limitant les possibilités de la consommation future. Avec l'expansion de crédit augmentent les profits des banques, en commençant par les banques foncières et les banques d'investissement et les autres entreprises financières, qui peuvent étendre le champ de leur activité financière par la création des sécurités dérivées qui deviennent à leur tour objet de la spéculation ajoutant au "windfall" profit financier. Et avec cette inclination vers la consommation les individus américains finissent par cesser d'épargner. Et avec la course affolée à avancer du crédit à un public d'un pouvoir d'achat actuellement restreint et potentiellement incertain, la ruée bancaire vers l'expansion de crédit et la spéculation poussée dans un processus de garanties sans limites à partir des contrats de crédit foncier, ébranle le marché de crédit devenant le lieu de la manifestation de la "crise" comme un point de la série des krachs qui annonce l'effritement de la crédibilité de l'ensemble du système.

- à accélérer le taux de l'endettement de l'économie américaine à l'intérieur (l'endettement des ménages et de l'Etat vers l'extérieur (l'endettement de l'économie américaine), une accélération qui se cristallise dans un déficit :

\* des budgets des ménages : déficit dû à l'insuffisance relative des revenus monétaires actuels (avec la polarisation économique croissante, le gel des salaires, la détérioration des systèmes de sécurité sociale, le chômage (surtout le chômage technologique et celui qui résulte des opérations de "rationalisations" qui suivent les affaires d'intégration et d'acquisition entre les

entreprises dans le cadre du processus de la centralisation du capital...)

- \* et un déficit du budget de l'Etat à l'intérieur. L'Etat aussi devient "addict" de déficit budgétaire, déficit qui n'est pas couvert par des épargnes réelles
- \* plus un déficit de la balance de commerce et de la balance des paiements (cette dernière est principalement affectée par les dépenses de l'Etat américain en tant que gardien du système capitaliste à l'échelle internationale).

*La tendance rentière* de l'économie américaine : elle devient la plus endettée du monde. Elle s'individualise dans l'histoire de l'économie capitaliste par le fait qu'elle est l'économie la plus endettée dans l'économie internationale et possède à la fois la monnaie principale dans la circulation monétaire à l'échelle internationale.

C'est- à -dire qu'elle continue à posséder le mécanisme de bénéficiaire d'un standard de vie et d'un mode de comportement international qui dépassent ce qui lui permettent ses possibilités économiques réelles, i.e., elle joue *le rôle de rentier* à l'échelle internationale. Ce qui concorde avec la loi principale du capital en tant que rapport social : l'exploitation par la classe possédante des moyens de production des autres classes sociales. Et de la même logique, l'exploitation par le capital le plus fort sur la scène internationale des autres économies ce qui provoque la lutte entre les capitaux et explique le fait que chaque capital revient chez "lui" pour faire payer par les autres classes sociales le coût de "faire face à la crise" ou de sauver les institutions tombantes (même dans le cas où elles se sont mal comportées en tant que "capitalistes idéaux" : l'Etat avance à ces institutions des sommes colossales d'argent, sous plusieurs formes par ce que l'Etat collectionne des payeurs d'impôts : c'est la privatisation des profits et la socialisation des dégâts. Rien d'étonnant.

## 2 - La trajectoire de l'économie américaine :

- Avant les années 1980 il y a trois décades d'une politique économique Keynésienne : intervention de l'Etat dans la vie économique : une intervention ayant un caractère productif : investissement dans l'infrastructure matérielle et même dans des projets de production – des subventions aux agriculteurs – reconstruction de la production militaire – à partir de 1934, une obligation de la part de l'Etat de convertir le dollar, en papier, en or à un prix fixe- cette politique Keynésienne implique l'utilisation de tous les composants de la politique économique de l'Etat.
- La période après la 2<sup>e</sup> guerre mondiale, jusqu'au mars 1968, le comportement de la classe dirigeante américaine à l'échelle internationale – l'expansion de leurs dépenses extérieures de toutes sortes – les limites de l'économie américaine : début de manque de confiance dans le dollar – début des manifestations financières différentes de la "crise" au sein du mouvement séculaire de l'économie capitaliste au cours du siècle – la relation officielle entre le dollar et l'or est rompue (1971-1973)- mais il reste la monnaie internationale principale.
- L'augmentation de la dépendance de l'économie américaine de l'importation de l'énergie.
- La trajectoire de l'économie américaine se caractérise depuis le début des années 1980 par l'absence d'une organisation de l'activité financière, au moins dans l'apparence.
- Le *ralentissement de l'investissement productif*, i.e., dans le domaine de la production réelle, y compris les éléments physiques de la production : Bâtiments, équipements, bureaux...)
- Un tel ralentissement est accompagné d'une très grande *augmentation non précédée dans la consommation*.
- Cette grande augmentation de la consommation amène à un *déficit de la balance de commerce extérieur*.
- Comme écho à ces tendances se montre un *grand essor de la dette intérieure* (essentiellement la dette des ménages et du secteur financier)
- Cette trajectoire :
  - est guidée par la consommation au détriment de l'investissement productif (il sera nécessaire de voir *la demande des logements* dans ce "pattern" de demande des biens de consommation durables)

- est nourrie par la vague de crédits avancée par *les institutions financières américaines*, avec la conscience nécessaire que rien ne pourrait être possible qu'à travers le *financement par le reste du monde*.
- La signification de cette trajectoire pour le fonctionnement de l'économie américaine :
  - les profits, dont les entreprises gardaient auparavant une grande partie pour l'investissement sont actuellement payés aux créanciers sous la forme d'intérêts (servir la logique du capital financier) ou bien distribués d'une part sous la forme actionnaire ce qui signifie que les entreprises retiennent une partie continuellement décroissante des profits pour financer le réinvestissement. A cela s'ajoute la tendance des entreprises quand elles ont des profits à réinvestir d'abord dans les achats des actions des autres entreprises, puis dans l'achat de leurs propres actions, puis dans les pays où se délocalisent les unités industrielles américaines : tous les chemins amènent vers l'investissement loin de la production réelle. Pourquoi ?
  - A côté, les portes de l'importation ont été largement ouvertes, surtout des pays du Sud où le coût de la force de travail est bien moindre (La Chine, la Corée de Sud, le Mexique, Vietnam...), surtout quand il s'agit des importations des "biens de salaires", soit sous la forme traditionnelle, vêtements...ou sous la forme des biens de consommation durables (voitures, équipements électriques et électroniques...). Ainsi une partie croissante de la demande s'oriente vers les importations, d'une manière telle qu'on commence à parler en EU d'éloigner la production à l'extérieur des Etats-Unis (le rôle des sociétés transnationales dans le remplacement du commerce international avec les autres par la production chez-eux, pour pouvoir ensuite exporter vers les pays d'origine).
  - Ainsi, la nécessité de garder une consommation des marchandises matérielles et des services produits à l'intérieur des Etats-Unis impose *une injection intensive de crédit* qui s'accroît d'une année à l'autre (pour compenser le déclin continu de la part relative au pouvoir d'achat de la majorité aggravé par la fuite d'une partie de la demande vers le reste de l'économie internationale). La production interne n'est soutenue par l'investissement que d'une manière limitée.
  - Cette trajectoire exige donc un crédit plus grand que le crédit nécessaire si l'économie nationale était moins ouverte et plus tournée vers son propre développement. Mais, qui l'empêche de

centrer sur son auto-développement ? La réponse n'est trouvable que dans l'étude du développement de la contradiction principale au sein du processus de l'économie réelle en tant que base de l'activité économique financière.

- La trajectoire de l'économie continue, sur *une base* réelle de plus en plus contradictoire, mais à travers une *ascension dans le crédit*, qui continue, *sans base*, par une *activité* qui se répète continuellement par *l'endettement croissant*. Au point d'arrivée résident les sables mouvants : *les dettes hautement risquées*. On a là le lieu de l'éclatement de la manifestation financière d'une pratique qui s'éloigne de sa base à cause du développement des contradictions au sein de cette base.
- La lecture de cette trajectoire de l'économie américaine peut donner l'impression que l'État américain pratiquait dans la réalité sociale une politique économique néo-libérale à l'image de ce qu'ils prêchaient sur le plan de l'idéologie économique et dans le cadre de recommandations de la BIRD et le IMF imposées sur les économies sous-développées pendant la crise de l'endettement de ces économies. En effet, la politique économique de l'État américain était une politique bien interventionniste d'une manière plus ou moins régulière, l'État intervient :
  - par une politique fiscale qui oscille autour du déficit budgétaire.
  - Par une politique monétaire qui oscille autour de la baisse du taux d'intérêt,
  - Par une politique commerciale qui oscille autour de la baisse de l'US\$ par rapport aux autres monnaies, pour baisser les prix de leurs exportations,
  - Par une politique commerciale qui oscille autour de la grande importation, surtout des biens de salaires
  - Par une *politique économique ayant une nature de rentier* :
    - \* encourager la consommation à l'intérieur : ce qui signifie limiter l'épargne et l'investissement.
    - \* favoriser le but que le peuple américain cherche à améliorer son standard de vie sans que cela soit associé par une augmentation parallèle de la production réelle.
  - Par une politique économique soutenue par le capital financier américain :
    - \* quelquefois par l'application forcée des lois américaines à des étrangers dans le domaine de l'échange international, et
    - \* quelquefois par la force militaire.

- La politique économique de l'Etat américain n'était pas vraiment néolibérale que dans le domaine de la consommation des *services* où l'affaire est laissée aux forces du marché soutenues par la politique.

### **3 - Le lieu de l'éclatement des manifestations financières de la crise, les années 2000 :**

- Le lieu, l'économie américaine, est riche des éclatements financiers, des bulles et des krachs, au cours des années 2000.
- Après les récessions des années 1982 & 1990, la reprise économique est assurée grâce à la poussée miraculeuse d'une nouvelle technologie appelée la technologie de l'informatique : 4 ans d'expansion sur le marché financier (dès 1996 à 2000) – puis un krach à 2000, suivi par une récession en 2001 avec l'éclatement de "la bulle de l'Internet".

La récession de 2001 intensifie la crise de la bourse- la banque fédérale intervient pour encourager le crédit : expansion de la consommation et du marché foncier – mais un rétrécissement de la production matérielle – *les entreprises non-financières* ne répondent pas à l'appel de la banque fédérale : *les tendances négatives à long-terme commencent à se déclarer*. Les entreprises de la production réelle si elles empruntent de l'argent *n'investissent plus sur les territoires américains* – elles mènent une bataille moins dure : *la bataille de "merging" et des acquisitions ou de l'achat de leurs propres actions* – la banque fédérale réduit le taux des prêts aux banques à un niveau très bas. Il devient négatif si l'on prend en considération le taux de l'inflation – mais les entreprises de la production réelle continuent à ne pas reprendre- c'est le secteur financier qui se hâte à exploiter la situation, avancer des crédits aux individus :

- Après 2000, *la consommation*, qui avait atteint un niveau très élevé, cesse d'accroître à un taux supérieur à celui de la production totale.
- Ici intervient *la construction* qui vient porter le drapeau de bénéficiaire de la politique d'un crédit bon marché. Le secteur est en pleine expansion à cause de la hausse des prix d'immeubles.
- Dans la ruée vers le profit financier, avec un taux d'intérêt très bas, les banques financières et les banques d'investissement se précipitent à avancer du crédit pour faire face à la demande des ménages pour les logements, soit pour y habiter, soit pour les

revendre plus tard pour se constituer un capital-argent avec la hausse des prix de logements.

La demande du logement occupe une place particulière dans le budget de la famille américaine et dans la demande totale de l'économie nationale :

- pour des raisons historiques, dans une société qui se constitue, après avoir pratiqué l'éradication presque totale de la population du continent, par des vagues d'immigrés volontaires et d'Africains déportés, le logement représente le premier et le plus important lien entre l'homme et le lieu, un lien qui donne à l'immigré un sentiment de stabilité et de sécurité
- en plus, avec l'augmentation du niveau du revenu de la famille elle tend à améliorer ses conditions de vie, souvent pour avoir de meilleures conditions de logement, par exemple par l'achat d'un autre type de logement.
- sous la hausse tendancielle des prix de logements la famille peut penser à vendre son logement actuel pour se faire une somme du capital-argent et acheter un autre logement à crédit
- de cette façon la demande des familles américaines d'un logement acquiert une importance relativement assez grande dans la demande totale de l'économie nationale.
- cette demande est habituellement financée par le crédit avancé par les banques foncières. Mais, les familles font recours à ces banques pour financer aussi une partie de la demande de certains services : à savoir les frais de l'éducation des enfants et les dépenses pour le soin de santé, étant donné un niveau modeste des services publics dans ces deux domaines.
- la demande du crédit pour le logement et de ces deux services représente 40% de la demande totale dans l'économie américaine. Cette demande permet la réalisation d'un tiers du taux de croissance annuelle de l'économie américaine.
- dans la folie du gain financé et avec l'étrécissement relatif du marché de crédit pour les entreprises de la production réelle, les banques foncières se précipitent à avancer des crédits de logement même à des familles qui se trouvent dans une situation financière douteuse et même à des familles méconnues du système bancaire : le super-prime crédit.
- Et, sur la base des dettes de 600 000 ménages, les institutions financières, de prêt et d'assurance, commencent à compiler des sécurités dérivées, pour qu'elles deviennent objets de transactions spéculatives afin de réaliser davantage le "windfall



profit". L'incapacité de rembourser, provoquée en partie par la hausse des prix d'énergie et des produits alimentaires (et peut-être aussi la diminution de la demande de logements à cause de la restriction de l'immigration) provoque une baisse des prix de logements. Et très vite éclatent des manifestations financières d'une crise, qui ne fait qu'annoncer l'effondrement du système financier, basé, même de loin, sur une base économique en crise structurellement séculaire.

## **En guise de conclusion**

في كل حال ألف احتمال واحتمال

*A chaque actuel mille et mille potentiel*

Pour nous, la crise actuelle de l'économie capitaliste internationale cristallise sans équivoque la crise générale historique du mode de la production capitaliste. A partir de notre étude, plusieurs scénarios sont possibles : Nous nous limitons à deux :

1- Laisser pourrir la situation actuelle, même avec des mesures de sauvetage, alors le mode de production capitaliste se présente comme l'homme malade du 21<sup>ième</sup> siècle :

Plus de misère, relative et absolue, pour la majorité de la population du monde : plus d'insécurité pour la minorité dominante. Plus de violence, des zones de conflits armés, des guerres locales et régionales, des massacres à une échelle de plus en plus illimitée, des violations de l'environnement non-précédées : notre globe est physiquement et socialement sérieusement menacé. Le capitalisme ne fait plus un système. Things fall apart.

2- Activer les revendications populaires. Agir pour que la conscience sociale se transforme en conscience politique qui pousse à l'organisation et de l'organisation à l'action et de l'action au changement : la négation historique de la société capitaliste vers une société vraiment humaine.

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24-3-2009



**PART THREE –**

**THE CONTEMPORARY ARAB CONTRIBUTION  
TO WORLD CULTURE IN THE FINE ARTS  
AND THE LITERARY DISCOURSE**

## CHAPTER SEVEN

# REFLECTIONS ON THE NARRATIVE OF PLACE: THE INFINITE CONVERSATION

**RASEM BADRAN**

EMINENT JORDANIAN ARCHITECT  
OF PALESTINIAN DESCENT

The narrative of place stems from the experience of actual relationship of place with its layers, within which the collective mind attempts to articulate its hidden characteristics through the built environment. This reading is a dynamic Process throughout time, starting with research and analysis to get familiar with the materialistic and spiritual aspects of place.

Such analytical research leads to the formulation of a narrative of the events that occur in this place, which is physically expressed in habitable entities. This narrative is a renewing product of the coexistence between man and place, which is constantly changing over time. This relationship can be comprehended by understanding the frameworks that contribute directly to the methodology of space. This can be categorized into A. Design components (place, time and man), B. Design approach.

### **Design Components**

Design components are the preliminary perceptive dimensions that can be addressed in order to perceive the coexisting network of characters that the place inhibits within time. All throughout the contextually specific human behaviour that man articulated his liveability accordingly. All in a form of a tethered knot that sustains the deep feeling of understanding one's culture and environmentally sustain it. This can be contextualized as follows;

## Place

Place is stated as 'Al-makan'; which is an adjective in Arabic to the ability to aptitude within a space. It is vital and significant in nature, and an outcome of interaction with man through his constant, dynamic, private, and public status. That is correspondently portrayed by the materialistic, spiritual, and mental temptations which activate a social urban fabric. A fabric that is tethered by the spontaneous and unprogrammed social events that surface through the complemented human scale; and eventually leads to the understanding that a space is a multiplicity of places that evokes human awareness.

This organic understanding of the architectural space is vital and humane in its spatial meaning in addition to character (spiral); and differs from the numerical (Euclidean) and repetitive geometric perpetuation. Therefore, it beholds characteristics (that are linked to historical, environmental, climatic constraints, habits, traditions, inherited values, Religion, and language) that evolve a space along a never-ending social transformation that would develop awareness to its sacred genius, a genius where one can retrace and uphold the genetic encryption that morphs the race of that specific architectural place.

Consequently, when this space loses these specific characteristics, it becomes a purely functional setting, one that is considered a utilitarian dimension that can be copied and transferred from one place to the other, thus becoming a consumerist commodity due to the lack of intimate relationships; whether they were with the user or the context; and lose the aspect of continuity of the living heritage that descends and develops as generations experience it and organically adorn their historical era within its architectural fabric.

Therefore, the continuous regeneration of architecture is an infinite process of retracing the complex relationship and interaction between man and place, creating a built-environment which carries the meaning of heritage and overcomes the technological penetration that turns a place into a mere envelope of solid walls that are virtually experienced and never lived through the values of time.

Thus, the materialistic, geographic, natural, and climatic characteristics must be thoroughly considered when addressing an architectural space in addition to comparing it with similar models that inhibit that enigmatic spirit, and cordially generate the metaphysical definition of the city through adding a sociological code that is associated with that era.

## **Time**

When related to the theory of relativity, time would be the variable factor within the constant setting of place where it would be the constant equation with variable sub equations and inputs that take part in defining the subsided outcome whereas it undergoes the traditional interpolation of heritage, customs, and other aspects that are ironically diverse throughout this untouchable yet perceivable medium of time.

### **Time as a variable constant**

Time is a dynamic and untouchable human permutation that undergoes a continuous change throughout the concept of relativity. It is highly measured in architecture, which can be considered as one of the measurement tools of time that reflect values related to social structures and cultural environments, in addition to forming a media for reading the dynamic human interpretations through this continuous change of time.

It can be interpolated through studying the Historic consciousness of events and realities that can change the characteristics in addition to the future influences (behavioural patterns) of a place, and maintain the level of sustainability through place and time.

Thus, our understanding of time in its numeric–static ... cosmic–dynamic dimensions is what constitutes the modes by which we define spaces accordingly, where it plays a role in changing space patterns; specially the sensitive ones that enclose diverse material and spiritual facilities and carve repetitive events in the memory. Consequently, time creates social urbanism due to its diverse cosmic nature.

### **Man – Homo Faber**

Man, as a vital character, whose role alternates between being a composer and a receiver, has the ability to create events which behold his inherited experience with the future, composing new perceptions (meanings) which are expressed here and now.

This can be adherently contextualized through the analysis of the social, cultural, and environmental systems which play a role in shaping the individual's mental behaviour and performance, in addition to their influence on the mental orientation, which in turn contributes in forming the place and its materialistic findings; the poetics of place.

Therefore, the continuous building process that man seeks; in both his esteem and the materialistic frameworks, is considered a way to produce a

vital and intimate zone within the urban fabric structure that generates a dynamic human urbanism throughout activating a portion of this public space.

The series of design components mentioned above can be considered as the backbone of approaching a design within a more balanced equation that links the materialistically tangible and the spiritually intangible discourse. That can, in turn, be materialized through the visualized medium of the design approaches.

## **Design Approach**

Approaching the previously stated design components can be put in a methodological wire frame that enables us to portray the symbiotal coexistence narrative that is intuitively driven yet semiologically perceived. Therefore, it can be categorized into coexistence, suggestive narrative, and intuition.

## **Coexistence (Symbiosis)**

The term coexistence provokes the notion of the 'space of probability' between different phenomena within a specific time span all between different periods of time, through its materialistic and spiritual dimensions. That evokes human urban events that contribute to its opulence and renew its reading.

The characteristics of place, which are submerged through the environmental materialistic and spiritual definitions, are in symbiosis with each other in addition to its association with time in its historical, cultural and social diversity. This coexistence is correspondently suggested by a poetic narrative that is a tool of interpretation that could be generated and activated by man who's in constant search for a formula of coexistence or adjacencies between phenomena in the whole as well as in the part.

Therefore, understanding the cosmic components of the place's *materialistics* throughout the context of time in a coursework of research and analysis could inhibit the observer from perceiving the ideological definition of symbiosis.

## **The Suggestive Narrative**

It's the approach of interrelating and connecting the materialistic and cosmic aspects of place, taking into consideration how it is shaped through the adverse analysis of case studies and applications.

It begins with an analytical investigation of natural, geographical, and environmental phenomena of place, including a comprehensive study of architectural behaviour with its morphological and ecological components. At this point, this analytical study approaches the knowledge of social trends, cultural behaviour, and inherited traditions which are reflected by local techniques and handcrafts.

This initial reading is an approach to identify the place's components and conditions, and it can be expanded to similar cultural and environmental domains.

Such an analytical reading leads to a narrative deduction where the evidence (which is adopted by the reading process) is always an instant initiation that reflects a new manifest of Predictability and generates physical architectural statements. It is an ambiguous physical status that produces mixed feelings and motivates the talent of discovery and renewable reading of the surrounding phenomena, leading to the continuous accumulative creativity through time.

Our configuration of that physical result is endless and differs from any Euclidian (linear-traditional sciences), it is exposed to all probabilities and readings (non-linear-new sciences). Therefore, to determine the variable's "dynamic human mind", it is essential to relate it to time and space.

It is the human mind which achieves its essence and defines it to embrace reality comprehensively. This essence is a result of a continuous mental process and meditation of scientific realities and their natural phenomena, producing spaces that seem informal and familiar.

The method of understanding the mode of operation creates Narrative events between opposite parts (e.g. hospital-recreation, museum-commerce, government- cultural centre, and mosque-house), thus rereading the stereotypical man-made facts through distractingly and constructively redefining its composition.

This informal product that reflects Harmony and non-homogeneous diversity within repetition generates a human space that considers its dimensions, Public-Private-whole and part. Thus, the significance and familiarity of space invite us to occupy and experience it.

## **Intuition**

Intuition is a way of embracing reality comprehensively, instead of knowing it in a relative manner, where such an act is distinctive in understanding life (through its continuous motion and change) with



sensing the non-homogeneous, the continuous, the interrelated, and the unpredictable.

Intuition is the process of activating the self through coexistence with place and its secrets while experiencing events.

This intuition is exposed to further possibilities of the place and its phenomenon. To understand this phenomenon, questions should be asked such as: who am I, where am I, and when in the context of what and how.

### **Intuition through questioning who**

It is the spiritual and psychological content that is embraced by the culture of the place, giving distinction and universality within the structure of the cultural mosaic through a series of constructive visions.

It starts from the specific spiritual relationship between man and his creator that is materialized through an expression that combines meaning, values, clarity, and beauty in a bond that produces levels of contemplation within the MACRO and the Micro COSM.

It is the “Third Eye” which contrasts between Az-Zaher (the Manifest) and Al-Batin (the Hidden) where the macro and micro act harmoniously together throughout the transformation of a simple abstract image to a volumetric one, in the form of a dialogue between the surface and the spatial mediums. It means transforming the living nature into an expression which links meaning, clarity, and aesthetics together. It is also a celebrative transformation of reality into abstraction

Furthermore, it is the universal nature which adds a sense of variability to the nearby physical and the far removed metaphysical, acting like an energy that stimulates and activates the human intelligence and perception. Correspondently, it engages him in a dialogue with this energy (light).

### **Intuition through questioning where (constants of place)**

Where, on the other hand, searches for the spirit of the place and its behavioral patterns (hidden powers) that are formed by the permanent environmental, climatic, and geographic cosmic factors in a set of diverse inspirations such as the sunny and the shaded, the fertile and the barren, humid and the arid, the coast and the plain, the high and the low, the cool and the warm, and the intimate relationship between the human being and the source of living.

### **Intuition through questioning when (variables of the place)**

It is the question of time and its evolution, which is dominated by what and how.

### **Intuition through questioning what**

It is the act of consciousness which defines an approach to the universal phenomena in a dialogue between the tangible and the intangible where the reality and the virtual fantasy are juxtaposed, generating the human creativity while shaping any space.

Such generation would inherit the tendency towards concurrence of the communal versus the cellular, abide the crisis between the traditional and the contemporary, and perceive the co-existence of both the craftsmanship versus the technology while shifting from the rural to the urban contextualization. All this is realized in the form of a cohesive dialogue that generates the human creation of the space.

### **Intuition through questioning how?**

It is the variable within the framework of **TIME**, a condition which is generated through the interaction between **WHO**, **WHERE** and **WHAT**, and which leads us to continuous addition through contemplation. It is identifiable in both the macro and micro scale in order to revitalize the contextual narrative underplayed within a place.

The macro scale in the historically inherited environments could be perceived throughout the social mass as a whole, and approached within the street patterns, trades lanes, urban morphologies, the dialogue between the monument and the façade, in addition to transformations that the urban elements undergo through time.

On the other hand, the micro scale is oriented towards the direct encounter with man singularly, in addition to the sense of the place and how a living wall is contextually enclosed. Hence, it is professed in elements such as the aspheric roof, science of building throughout the sound defining waves, and the architectural technology; ranging from the metaphysical medium (The Domes) to the physical one (The Walls).

Furthermore, the intuitional dialogue in the micro scale can be achieved through the thorough research and perception of ecological intervention of man in aspects such as climatic treatment (in wind towers-ventilation towers) and the narratives portrayed in the breaking skins and gardens.

## **Conclusion**

The problematic that is read when looking back at what has been achieved in the past 50 years disdains the observer to reach a conclusion that we are currently living in empty cities that are built as temporary seasonal fairs. Such cities, as a consequence to the present scenario, fade away and lose their special character due to the consumerist oriented urban environments that evolved in the 20th century civilization.

This in turn disturbed the balance of human existence and destroyed human values and memories. This is through the destruction of buildings aged less than 20 years in some of the region's cities and replacing them with other new structures; all for serving the consumer's society at the expense of human 'coexistence' in addition to his moral values, not to forget the breaking of the genius of the place through the loss of its memory.

Therefore, in hypothesis, we can claim that architecture is the product of cultural (who), environmental (where), and social aspects interaction. That contributes to the essence and ensures sustainability. For that reason, I believe, that the architect's role is not to imprint his personal style taken from the place's individual character, but rather to evolve and propagate a continuous discourse that investigates and excavates deeply into the secrets of the place in order to explore its own tools and media of expression. It is the micro with its sensitivity and spirituality being in symbiosis with the macro with its cosmic knowledge. This is what the Islamic civilization is seeking within its nature whereas it considers the whole without denying the particular and establishes a cohesive interrelation between them accordingly. The objective of presenting the following projects is to bring to the surface the urban theme in the part to become itself the whole that creates the living fabric, thus maintaining the balance between what is mental, spiritual and materialistic. This is realized within a wire frame that manifests the metaphysical untouchables in a specific place and how an environment with constant tangible norms could portray the social and humane behavioural existence of man, thus articulating his identity in a physical manner that would act as a marker in stating the intangible constants through time and maintaining the righteous transformation of knowledge and values throughout variable phenomena of time.

The following projects are approached within the same area but in different time spans. This led to the unravelling of the contextual layers that subsided in this place, thus inspiring the approach of maintaining the identity within the variable behaviour of time whereas the place owns

inspirational components that have the ability of redefining its paradigmatic code.

This is reflected in the Dialogue between the Grand Mosque, King Abdul Aziz Historical Center, and Al-Darreyah Projects – 25 years dialogue in Riyadh- KSA.

### **The Grand Mosque (Al Riyadh)**

The grand mosque and the urban fabric surrounding it are considered a part of the historic development of the city in order to revitalize the social, cultural and architectural richness. It is important to note here that the old Mosque has no clear physical evidence that could be considered as a reference for design elements. Therefore, the images of the past with its visual and nonvisual evidence have clear influence in identifying the spirit of place, in addition to the morphological inherited structures in the region that played a major role in reading and configuring the elements of place in an analytical fashion on both the micro and macro level to reach a contemporary architectural product.

### **King Abdul Aziz Historical Center – Riyadh, Al Dara Museum**

On the contrary to the method and reference adopted in the Mosque, the Museum and its architectural phrasing emphasized the inherited ruin as an incomplete construction showing parts of a rich form of crafts, which stimulates the mind and perception by its contemporary fashion.

The design of the museum stresses the following:

- The Macro scale (The context).
- The Micro scale (Level of sensitivity).
- The human scale (Enclosure).
- The social urbanism (micro-macro) - Climatic layer (The Oasis).
- Cultural framework (The memory).
- Dynamic framework (The organic).
- Ecological framework (Passive energy)

### **Al-Derreyah Project – Riyadh-KSA**

It is the third implemented project in the same region of Al-Riyadh, whereas its social and cultural genius of the place continued through the physical continuation of a yet inherited definition. This inspiration of the genius of the place was a mere translation of the historical and place-

oriented memories that in turn analysed the genetic encryption that is documented in the metaphysical dimensions of the historical properties.

This encryption was perceived, redefined, and contemporarily translated in a way that is far beyond eclecticism; in an approach that was oriented by the present and inherited constants; in a manner that is far beyond the semiological stereotypes. That is re-inscribed in a contemporary definition that maintains the social and public relationships and sustains its continuation in a manner that implanted factors that sustain social beliefs adaptable for any social progression of a development; all contained within this physical wire frame.

In addition, the approach is mainly dependent on the public space where it is fed by functions that ensure the sustainable upheaval of that area, ranging from commercial to services. Whereas the most outstanding part of the project was the library (that deals with Al-Quran and Islamic science), it was enhanced through the spiritual site givens and added to give cultural value, that is beyond entertainment, to that space and hence the project, in an architectural definition that is oriented towards the city (the source of tradition) whereas the main plaza (library's roof) was sloped towards the old village of Al-Dereyyah (which will turn into an exhibition that presents the life of the Royal family). It is oriented to accommodate the public audience in an approach that is visually accessible, thus acting as a space of social interaction that inhibits different scenarios within a space of meditation that links the observer with the value of the past within the present (to create his own narrative).

This approach of the slanted roofs is also more developed in Sahwan Al-Shareef Project which deals with creating public spaces that are facing the famous tomb of a religious figure in Sahwan Al Shareef in Pakistan.

### **The Museum of Qatar (Poetic Narrative)**

The method of receiving signals from the ruined past and how to read it through a story to solve the enigma, was defined and clarified in the museum of Qatar for Islamic Arts. The project stresses the following:

#### **1-Sensible reading of the site:**

- Reading what's hidden in the site
- The trees as a witness for the sites social fabric.

#### **2- Redefinition of the cultural knowledge:**

- The vital relationship between part and its whole space.

- Using the discovered ruins as a Museum background for the contemporary solution.
- Coating the presented material with another rich of social pieties reflected by the cultural and commercial gathering.

## **Al Yemen: The Project of San'a**

### **The design methodology of the scheme went through:**

1. Analysis and evaluation of the local culture.
2. Setting up of guidelines.
3. Implementation of these guidelines.

### **A - Critical Analytical Study**

#### **1-Urban Level**

This analytical study begins by comparing the characteristics of San'a's urban texture with Arabic Islamic cities such as Cairo, Qiarawan, identifying the constant and variable aspect.

##### **(1-1) The Cultural Aspect:**

It proves that the city centre is a constant feature of all Arab-Islamic cities, which constitutes the main Mosque, the commercial and functional activities gathered around them, including the living quarters.

##### **(1-2) The Spatial concept:**

San'a residences are grouped vertically around gardens (Bustans) in ways comparable to those of a typical Arabic Islamic city, where residential neighbourhoods are grouped horizontally around the internal courtyard.

#### **2-The Morphological Partial System of Private Residence in San'a (micro):**

The adoption of the vertical residential cells in San'a arises from nomadic socio-agricultural needs and the specific topography of Yemen, where agricultural land is highly valuable and guarded through these residential cells.

#### **3-The Spatial Arrangement of the Architectural Expression:**

##### **(3-1) Environmental Aspect:**

The vertical system provides sensitive relationship to the outdoors particularly with the sun and wind through openings of varied compositions and articulations.

**(3-2) The Architectural System of Openings:**

Cosmic aspects influence the shape of openings.

- Vision
- Light
- Ventilation

**(3-3) Accumulative Behaviour of the Family Structure (the incremental growth)** is manifested through (decorative band) symbol of fertility (Bull Horns)

**(3-4) Social Pattern (the Kamriya)** acts as a common dominator despite the social difference.

**(3-5) Technological Pattern** – exposed sewage systems.

## **B - Critical Evaluation (design guideline parameters)**

### **1-Morphological pattern of the urban elements:**

On the macro level, one can realize that there is a repetitive proportion between the solid and the void (Residential groups occupy only 30-40% of the land). It leads us to planning the following:

- Linear elements
- Networks
- Clusters
- Void spaces (open spaces)
- Vital Components of urban elements

### **2-Urban Planning Principles and Guidelines Include the following:**

- a- The vertical organization of the residential units, providing an orientation of the house towards the sun and wind.
- b- The linear organization of the residential units around open spaces serving as gardens.
- c- The vertical variety of functions within the house allowing us to change the grand floor function form being storage into a parking area.
- d- The opening system responding to the variety of form and function.
- e- Implementation of Design Principles and Guidelines.
  - 1 The organized planning framework for the proposed concept.
  - 2 The spatial Concept and its Inherent Meaning and Values
  - 3 The Contemporary Expression, a traditionally based concept.

### **Al-Shameyyah Project- Makkah, KSA**

It is an urban approach towards the sacred area of Makkah that responds to the geophysical nature of the site, in addition to the respect of the social behaviour present through plotting their social pattern.

### **Futuristic projects**

Projects that contemporarily deal with the present vertical rush towards high-rise buildings, putting in consideration, and inspired from, the contextual surrounding.

Jebel Hafeet  
Dubai Sundial

This presentation is an attempt towards reaching an epistemological phrasing of place in order to prevent our cities from becoming abandoned dead places that resemble cemeteries in their monotony and lifelessness, where the elderly express confusion, waiting for their inevitable and silent end, and where the child looks lost in a world of uncertainty. Finally, great efforts have been undertaken to humanize people's lives through technology, did they succeed? Our aim is to seek places where the elderly and the young can communicate and interact to maintain the continuity of such places through time, hence sustaining their own narrative.



## CHAPTER EIGHT

### RASEM BADRAN'S REFLECTIONS ON THE NARRATIVES OF PLACE ENTITLED "THE PHENOMENON OF SPACE IN ARCHITECTURE"

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I feel honoured, having been asked to comment on Rasem Badran's reflections on the 'narratives of place.' Going by the photos I have seen of some of this architect's works, I think these buildings reveal a rare sensibility which is expressed in their shapes and proportions as well as their colours. The latter seem to echo the colours of the landscape as well as those of traditional building materials taken from the landscape whereas the former, accentuating horizontal lines and planes, communicate the wideness of the land and the flat desert horizon. Such horizontal lines can find a counterpoint in vertical features that act like *windcatches*. I have of course only one or two specific buildings in front of my inner eye now, buildings placed in a Jordanian or Saudi Arabian context, and I remember them faintly. But I think I can convey the gist of the matter. Rasem Badran's reflections, that I want to comment on, attempt to do one thing, mainly, I think. They want to reveal the way he works, or rather, the considerations, ideas, questions, strands of cultural awareness that inform the way he works. The term "narrative" that Badran tellingly uses in the plural has come to be used in architecture only in recent decades. It has its origins in colloquial talk referring to a phenomenon common in oral traditions. It was then appropriated by literary analysis. In the strict sense, it refers to the spoken and written word which is a diachronic phenomenon whereas we usually think of a place and its buildings as static, synchronic phenomena. But Rasem Badran correctly indicates that both have a

historic dimension. Human places have a history; buildings age and become not only historic objects themselves, but also "witnesses" of human history. Badran aptly uses the term layers, which could imply an "archaeological" approach or archaeologist's look at things. If the terms "narrative" and "narration" were first used in a non-colloquial or more exactly a theoretical way in *literary theory*, it was Christian Metz who first applied them to *non-verbal reality*, that is to say, to *film* as a largely visual result of human creativity.<sup>1</sup> Metz spoke of a "cinematographic language" [METZ (1992), p. 328] that could be analyzed by semiologists; film was an articulated medium that could be subdivided into such syntagms [or formally, structurally identifiable units of meaning] as (A) scene and (B) sequence.<sup>2</sup> The scene, he wrote, "reconstitutes a unit which is considered even more concrete, and analogous than those [units] offered to us by theatre or life (a place, a moment, a small action - distinctive and condensed)." Typical of the scene was, for him, that despite the fact that it came to life in front of us in "several shots which are all just partial profiles - Abschattungen", "the signified [the meaning] is experienced as unitary." [METZ (1992), p328f.] Here, then, we have already the key connection this semiologist made between PLACE, TIME, the human EVENTS taking place in TIME, at a specific PLACE, and the meaning of

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<sup>1</sup> "One of the most significant shifts in narrative analysis began in the 1960s with the French theorist Christian Metz, who built upon linguistic theory, including that of Ferdinand de Saussure, to bring structural analysis into film scholarship. Metz, along with Roland Barthes, set the groundwork for much of subsequent work on narrative, including the shift toward discourse analysis." (N.N.(2008), "Narrative Theory", in: <http://www.filmreference.com/encyclopedia/Independent-Film-Road-Movies/NarrativeNARRATIVE-THEORY.html>)

<sup>2</sup> In the text quoted, Metz referred to six filmic syntagms. The other syntagms mentioned were: (C) the alternating syntagm, (C) the frequentative syntagm, (D) the descriptive syntagm, and (E) the autonomous shot. [METZ, in: GILL/POTTIER (1992) pp. 328-334] While syntagms formed the 'basic units' of the analysis of film that prompted Metz to employ the concept of 'narrative' not only with reference to literature but also to film, Chandler asserted that syntagmatic forms could be recognized as well when analyzing architecture: "Whilst narrative is based on sequential (and causal) relationships (e.g. in film and television narrative sequences), there are also syntagmatic forms based on spatial relationships." [CHANDLER (2006)] There can be no question about the fact that the pioneering work of Metz in widening the application of terms used in the analysis of written texts occasioned the introduction of concepts typical of discourse analysis in other disciplines, such as the theory of architecture. Prior to the theoretical contribution of Christian Metz (in the 1960s), terms like 'language of architecture' were used more loosely and in an entirely metaphorical way while the term 'narrative' was absent in architectural analysis.

all of this which is constituted as a NARRATIVE that is constructed.<sup>3</sup> According to Metz, "the vectorial nature of time" was a "peculiarity of a 'narrative'" but, depending on the way the narrative was constructed, it could also "tend [...] to disappear" when the construction introduced "cyclic returns". (METZ, p.330)

This makes clear three things: 1. narratives are a product of human narrative praxis<sup>4</sup>, 2. narratives which may refer to time, place, and actions of people do themselves occur in time, they are diachronic, 3. the experience of time (i.e. of history) they convey to those exposed to the narrative may be *vectorial*, that is to say, linear and progressive, or *circular* and seemingly stationary, or even *spiralling* (circular and progressive), depending on the narrative techniques used.

It is not by chance but rather symptomatic that Rasem Badran ties the concept of "narrative" to that of "place". James Steele, for good reason, has seen his work as a fine and above all, successful example of a contemporary Arab architecture of identity. [STEELE (2009)] If Rasem Badran, the architect, concentrates on narratives of place and, while considering the context of a building he may design, tries to harken back

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<sup>3</sup> Its recognizable character as a narrative object results in the understanding of the recited object as unreal, as separated, even if only slightly, "from the fullness of here and now." 5. Its most "basic units" are events, ("successive predications").

6. A narrative "represents one of the great anthropological forms of perception (for the 'consumers' of narratives), as well as of operation (for the inventors of narratives)" (Metz, 1991)." [KELLY (2002)] Another author explains 'narrative' as follows: "In media terms, narrative is the coherence/organisation given to a series of facts. 'Story is the irreducible substance of a story [...] while narrative is the way the story is related' (cf. Key Concepts in Communication - Fiske et al. (1983)." [Source: <http://www.mediaknowall.com/alevelkeycon.html>]

Chandler, in his 'glossary' of semiotic terms, differentiates 'narrative' and 'narration' as follows: [...] Narration is the act and process of producing a narrative. [...] A narrative is a representation of a 'chain' of events. In the orderly Aristotelian narrative form, causation and goals turn story (chronological events) into plot: events at the beginning cause those in the middle, and events in the middle cause those at the end." [CHANDLER (2006)].

<sup>4</sup> Drawing on insights of Christian Metz and confirming them, Martin Lefebvre also pointed out very clearly that 'narratives' are constructed in the course of an active reception process. Focusing on the cinema and the role of the recipient, he highlighted the relationship between the constructed 'narrative' and recalled place, people, events. He said that "in order to construct a narrative form and comprehend the characters' actions, the spectator must be able to recall faces, places, and situations from one segment of a film to another." [LEFEBVRE (1999)].

to the "narrative" the place tells him, it may well be that he is trying to sense, reconstitute, or reconstruct its identity – and possibly that of the people who live there, if not his own. Bruce Janz, an American who has tried to deconstruct the mythologies which the Bush-Cheney-Rumsfeld administration and their willing helpers in the media have invented in the form of *narratives of terror*, has focused critically on the "terror of place" and how "anxieties of place" expressed, for instance, by gated communities, preceded the media event that 9/11 has become and the "Cultural Narrative of Terrorism" associated with it.

He writes,

"Our anxious modern subjectivities include existential conditions such as ennui, angst, and vertigo (Sartre, Camus), along with psychopathologies such as schizophrenia (Deleuze), paranoia (David Harvey), and panic (Arthur Kroker). [...] At times, the concept of place has been seen as a panacea for a variety of social ills and misshapen subjectivities. Place is imagined by some to re-integrate the self, resist the anomic effects of modernization, provide continuity and meaning in an increasingly fragmented and meaningless time, and link the cultural self *back to a sure foundation*. [Emphasis by me (AW)] [...] While place seems to designate any geographical location, in fact the term has been used lately as a site of positive meaning, while locations bereft of meaning, or where meaning is deferred, become 'non-places'." [JANZ, p.191f.]

In other words, the concept of place seems to promise identification, closeness; the mythological stance that is inscribed in the term "roots" comes into play. But Janz warned that such identities, as all "narratives of place," are constructed, and that the identities that are associated with place, can be nostalgic (the yearning "for an imagined past (the 'small town' myth)"), humanist and forward looking (if not utopian), or "produced by our anxieties and manias" as in the case of the actual narrative which invented the United States as a beleaguered "city on the hill," threatened by strange outside forces.<sup>5</sup>

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<sup>5</sup> Janz put this in a wider cultural context of the 'modernist' West: If the "the comfort of place" was "a contradictory gift", it was "because there is a host of psychological conditions related to place that refer not simply to individual neuroses, but to identification of place as the cultural answer to dissipating modernism. We are well aware of agoraphobia (fear of open spaces or of being in a crowded place (Vidler, 2000, pp. 25–50)) and claustrophobia (fear of enclosed spaces) as cultural conditions. [...] [W]hereas Baudelaire's and Benjamin's flâneur was fascinated with the street, many today feel the opposite, acrophobia, fear of the street. Whereas place is meant to establish home as constitutive of the self, as a place of dwelling in a Heideggerian sense, we are now faced with oikophobia, or

While the term "narrative of place" is firmly anchored in architectural criticism by now (even everyday urbanist proposals already use the term, as is shown by a "SOUTHWARK'S LOCAL AREA AGREEMENT" of March 2008, entitled "Narrative of Place" and described as "A LOCAL AREA AGREEMENT THAT DELIVERS OUR VISION TOWARDS SOUTHWARK 2016"), we owe to Metz the insight that a "narrative" doesn't simply tell itself but is produced or constructed, and to Janz the insight that "narratives of place" can be extremely ideological, and that they can be contested. We must say goodbye to the assumption that there exists one authentic narrative of a given place that the place tells us. There exist several narratives, and each of them constitutes a specific "rapport idéologique" to the place, its people, their praxis, their socio-cultural form of expression and their history. The narratives of place told about Wounded Knee or about Soweto, about Sabra and Shatila, or Jenin, are different, depending on who would tell them. Narratives of place can be narratives of resistance.

Rasem Badran, it appears to me, has chosen a searching, sensitive, perhaps even poetic approach to place in order to construct its "narrative". But, as I will show later on, this approach may not be entirely free of vitalist and mythic facets. As he puts it, "[t]he narrative of place" that he invents "stems from the experience of actual relationship of place with its layers" [BADRAN (2009)], and it is of course Badran's private, sensitive experience of the place, the urban location, the town and its surroundings, people and history, which unfolds as he assumes the stance of an archaeologist, trying to probe into deeper layers and unearth the invisible that must exist, but that seems to be covered by the visible.

For Badran, who like most architects today, prefers a terminology typical of the discourse analysis of a non-verbal reality proposed by Metz in the 1960s casually using terms like "narrative", "architectural

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fear of home surroundings (Jacobson, 2004). And, while Yi-Fu Tuan could speak of 'topophilia', the love of place, we are now faced with 'topophobia', the fear of place (notably, also, fear of performing, or stage fright). Foucault argued that personal identity is made available not simply by acts of will, but by what is suppressed, feared, or prohibited. In the same way, the identity of a place derives in large degree from what that place is not. Sometimes this is a result of nostalgia for an imagined past (the 'small town' myth), sometimes the result of yearning for a utopian future, but the identity of a place can also be produced by our anxieties and manias. When it is, these anxieties and manias are no longer seen as pathological, but are rationalized as virtues." [JANZ (2008) p.192]

language", "reading" etc., the explorative work that precedes the design process amounts to a "reading" of the socio-cultural reality of a place. It is a reading, he says, that is (I quote), "a dynamic Process throughout time, starting with research and analysis", and necessary in order "to get familiar with the materialistic and spiritual aspects of place." [BADRAN (2009)]. As far as the "layers" are concerned that Rasem Badran tries to unearth in a process of research and intellectual as well as emotional (or should I say, physical, bodily, sensual) appropriation of the place in question, it is pointed out that by probing them we may discover that unexplicated 'something' (be it substance, essence, or simply 'content') "within which the collective mind attempts to articulate its hidden characteristics through the built environment." [BADRAN (2009)]

In other words, the architect's eye registers the existing built environment, not piecemeal but in a holistic way, finding in it those traces that speak to him of the "collective mind". I take this to be a reference to customs and to practices of past and present *generations of people who lived and live here, respectively*.

Above and beyond all languages typical of contemporary discourse analysis, this seems to me to transcend mere discourse and it may come close to a materialist probing of the traces left by ancient and more recent as well as contemporary human praxis. It is on the basis of this experience that Rasem Badran constructs, in his mind, the "narrative of the place", which seems to be something like a complex notion (concretely based and amply developed!) of the significance and meaning, inscribed in the 'past life' and 'present existence' – and possible future development? – of *the environment* in which the building he is going to design will exist. This, after all, is the task of the responsible and responsive architect. Frank Ching put it this way, "At each level [of designing a building], we should be concerned not only with the form of a building but also its impact on the space around it." [CHING (2007) p. 98]. But Ching's approach is formalist. He sees the problem as a question of the interaction or "symbiotic" [i.e. dialectical] relationship of the forms of mass [i.e. the formed (architectonic) mass or formed masses] and [the] space" that will surround it [CHING (2007) p. 98]; they interact dialectically like the white space and the black space in the Chinese symbol for yin and yang.

Such an approach is formalist because it is only concerned with forms, masses, spaces. People and their praxis are ignored; they will enter the picture later when the architect has finished 'his job.' They are consumers faced with the usual choice of take it or leave it.

Frank Ching's basic (dialectical, yet formalist) approach advocated the balanced integration of new objects into an "existing fabric of a place". But he admitted exceptions that mirror contemporary antagonistic social relations and their effects of domination vs. subjection. He was able to write, therefore, that "[a]t an urban scale, we should carefully consider whether the role of a building is to continue the existing fabric of a place, form a backdrop for other buildings, or define a positive urban space, or whether it might be appropriate for it to stand free as a significant object in space." [CHING (2007) p. 98] To say that we may consider whether it is "appropriate" for the building "to stand free as a significant object in space" is a way of saying that dominant buildings conceived as "solitaires" are admissible. These are buildings that may aim to be monumental. Or they may aim to be spectacular in an extraordinary way. And they all give a damn to the "existing fabric of place"; they are content to dominate it, to push it aside, to subject it. They express the economic sway and/or the political muscle of the client for whom the architect had the honour to design what Ching calls a "significant object"; a term that implies that all the other objects of the built environment into which that object was placed are considered "insignificant."

I have contrastively introduced Ching's position in order to highlight two features of Rasem Badran's position:

Badran harkens back to the visible and the invisible of the "existing fabric of place", that is to say, he transcends the formalism of an architect only concerned with built masses and surrounding spaces. To Badran, the buildings, the built environment 'speak' in a different, livelier, more complex way than they seem to speak for Ching. As Badran enters a neighbourhood physically, as he walks in between the houses and scans the architecture with his eyes, as he touches it, he perceives the traces of past and present use. And in this way, he also perceives the people who existed and who exist in this architecture: their daily lives, their praxis.<sup>6</sup>

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<sup>6</sup> We must ask ourselves, however, whether Badran's empirical, analytic and empathetic approach to PLACE (which forms the basis of the narrative of a place which he constructs) transcends the purely 'cultural' or 'culturalist perspective' or widens the scope, in order to focus as well on specific (and perhaps antagonistic) material needs and concerns of all those subjects whose interests can be asserted or denied, depending on how the place was used, is being used, and will be used in the future. Apart from aesthetic considerations concerning the relationship of forms, of build masses, and space that are so typical of formalist architects and critics of architecture, the more 'progressive' architects even within the Western mainstream are absolutely prepared to grant that "multifarious cultural aspects of

If Rasem Badran starts out from a sensitively reconstituted understanding (or, as he puts it, 'narrative') of a place inhabited by people (which is more than the abstract 'site', as seen by a developer, that is there to be *used*), this understanding is historical. The narrative Badran has in mind is formed by an architect who has registered past and present human "events that occur in this place". [BADRAN (2009)] This reconstruction that involves not only the present but the past as well becomes possible because of the *layers*, the *traces* traced. And this is done diligently and reflectively because Badran, as an explorer of the place in search of its 'narrative', cares for everything that is "physically expressed in [or by] habitable entities"[BADRAN (2009)] – that is to say, by the dwellings, workshops, shops etc. he can see, feel, smell, enter as he gets in touch with the place.

To reconstitute, on this empirical basis, an understanding of what a place was and what it is now, is certainly a responsible, socio-culturally aware approach worthy of a socially responsive architect. It is a conscious starting point that accepts a considerable responsibility.<sup>7</sup>

As noted already, it is empirical as well as "analytical research" which "leads to the formulation of a narrative of the events that occur" in a place which will be the place of a new building that Badran may design. [BADRAN (2009)]

And this narrative, Badran says, "is a renewing product of the coexistence between man and place, which is constantly changing over time." [BADRAN (2009)]

In other words, the use made of the existing place, the traces left in and on the existing building, the people inhabiting the built environment, all of that is constantly changing, and it implies an interrelationship, a *rappport pratique et socio-culturel*, between concrete people and a concrete place, which Badran puts a bit abstractly as: "coexistence between man and place." [BADRAN (2009)]

I would like, however, to inquire whether his ideological interpretation tends systematically towards abstraction: toward a *concept of man* and his eternally unchanging 'essence', toward a concept of *the 'cosmic' or 'cosmological'* as an eternally unchanging 'essence', etc. And this despite

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buildings and townscapes" must be taken into account. [DONOUGH (1987) p.53] PLACE for them assumes a cultural dimension. The limitations of a still fairly abstract, idealistic position are not overcome by this stance.

<sup>7</sup> Hassan Fathy, for one, has even broadened this understanding of responsibility by seeking to transcend the lonely individualism of the aesthetically sensitive architect, in attempting to realize participatory ways of collective design that would help him to integrate the input of future users in his actual design work.



Badran's undoubted sensitivity and ability to probe empirically all the layers of a complex socio-cultural reality which is present in the inhabited and, therefore, used environment that he tries to understand. Let us keep in mind that this environment can be a village, a neighbourhood in a small or mid-sized town, an entire town or even the historical center of a large modern city like Riyadh, Damascus, or Baghdad which has grown at a fast pace and in often chaotic ways in recent decades.

I would thus like to ask here, quite modestly, whether the following observation is correct: that there seems to exist a certain contradiction between *the real, empirical approach* which compels Badran to concretely experience and sense a specific socio-cultural reality that comes alive in a place and in the way its occupants or inhabitants fill it with their active presence. And, on the other hand, his preference for *concepts or attempts at conceptualization* that strike me as not only abstract (which is typical and unavoidable with concepts) but also as *empty*, or *unhistorical abstractions* which fail to include (or tend to push into the background) whatever concrete, historical knowledge might exist about the phenomena in question. Obviously, such knowledge ought to be expressed in the form of a much more concrete and specific discourse than he happens to offer (at least in his paper on the 'narrative of place').

In this vein, having pointed out my uneasiness with the undifferentiated use of concepts such as "man", "place", "spirit", "cosmic" or "cosmological" essence, etc., I would like to ask what exactly is implied when Rasem Badran suggests that the relationship between "man and place" (as he puts it) "can be comprehended by understanding the frameworks that contribute directly to the methodology of space." [BADRAN (2009)]

Which abstract relationship of man and place, which frameworks, and which methodology of space does he have in mind?

Perhaps Rasem Badran's position becomes clearer when we compare it with that of Sigfried Giedion.

Sigfried Giedion, a noted thinker whose importance with regard to modern Western thought about architecture can be compared with the noteworthy role played by Erich Auerbach<sup>8</sup> and Ernst Robert Curtius<sup>9</sup> in

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<sup>8</sup> Commenting on Auerbach's opus magnum, *Mimesis*, Gunter Gebauer and Christoph Wulf noted that "[t]he idea that *European* intellectual history has a structure and specific course belongs among Auerbach's preconditions for the reconstruction of *universal* historical continuity." [GEBAUER/WULF (1996) p.

their respective field of study, published his magnum opus, *Space, Time and Architecture* in 1941. It must be mentioned at least in passing that these thinkers all embraced Eurocentric positions in the 1940s or early 1950s that pose as 'universal'.<sup>10</sup> The reception accorded to Giedion's work has been such that even Frank Ching's discussion of architectural space must be seen as part of a *discourse tradition* that reaches back to Giedion.

As Charlie Q.L. Xue pointed out, "Giedion argued that the concept of space should be regarded as a criterion to judge architecture." [XUE (1980), p. 3]

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321; my emphasis (AW)] - Edward Said also saw in *Mimesis* "a massive reaffirmation of the Western cultural tradition" while adding that Auerbach's exile in Turkey introduced 'distancing' elements as well. [SAID (1983) p. 8], a fact also noted by GRAVES (n.d.)

<sup>9</sup> In 1948, Curtius' opus magnum *Europäische Literatur und lateinisches Mittelalter* was published in Switzerland; an English translation appeared in 1953 in New York. Both Auerbach's *Mimesis* and Curtius' *European Literature and the Latin Middle Ages* became tremendously influential due to the reception that was accorded to them in the U.S.A. Their Eurocentric "universalism" answered an ideological need at a time when the United States, in the wake of their victory over Fascist Germany and militarist semi-fascist Japan in 1945, began to assert their hegemonic role in the post-war world. The function of Giedion's universalism (expressed with regard to 'European' architecture) was very similar. - In order to critically assess the position of Curtius, it is necessary to remember that in 1932, just a year before the Fascists took over in Germany, this 'humanist universalist' published a work entitled *Deutscher Geist in Gefahr* [The German Spirit: Endangered]. According to Wolf Lepenies, "Curtius [...] believed that the democratization [...] of the German universities [during the short-lived Weimar Republic phase] had resulted in the weakening of traditional [...] values [...] What Germany needed was [...] strong discipline [...] Even more than the Western nations, Germany was in need of metaphysics [...]" Lepenies adds that "Curtius' book can be read as a sympathetic anticipation" of Fascism. [LEPENIES (2006) p.85] - The 'humanist' quality of Curtius' contribution to the construction of a *Western Eurocentric assertion of 'universal values'* has been lauded by EVANS (1970), amongst others.

<sup>10</sup> Magdi Youssef has been the first critic who noted the significance of Auerbach and Curtius with regard to the ideological construction of a Western 'universalist' canon that happened to bolster the quest for global dominance of European and North American literatures. I am indebted to the critique of Auerbach and Curtius formulated in his seminal study on the *Myth of European Literature* (Rotterdam and Aachen: Symposium Press, 1998). This critique can be expanded by including, in addition to Auerbach and Curtius, advocates of a Eurocentric 'universalism' who published works on architecture (thus Giedion and Zevi) and on art (Erwin Panofsky).

Modernist architects in the West have been supporting this approach, both in their thinking and practice. Bruno Zevi<sup>11</sup>, for instance, belongs to those who "reaffirm[ed] the dominant model in architectural design and criticism" that was developed by Giedion. [XUE (1980), p. 3]

Giedion's view of space was abstract and primarily form-related, and like many architects – indeed, many Western middle-class thinkers – he tended towards abstract, 'unchanging', unhistorical categories.

On the other hand, at first sight, Giedion seemed ready to embrace cultural specificity. He spoke, for instance, of the "rejuvenation of Japanese architecture", a rejuvenation that was "nurtured by elements which have persisted throughout its own traditions." [GIEDION (1967), p. XXXVIII] In a similar way, he lauded new and specific developments of architecture that had occurred, as he saw it, at the periphery of European culture and European architectural traditions, for instance in Finland and Brazil. He saw such new developments that he regarded as lively and fruitful, as undoubtedly rooted in "a particular region." [GIEDION (1967), p. XXXVII] But it is interesting *how*, in what way, he referred to this contribution of specific regions and *what* seemed to be the source of fresh architectural creativity in the regions singled out.

Identifying a "factor which is of no little importance" for the creation of "the best contemporary architecture", Giedion spoke of an "emanating force [...] generated by the respect" such architecture "has given to the eternal cosmic and terrestrial conditions of a particular region." [GIEDION (1967), p.XXXVII] He added that it was possible, as he had done previously, to speak of a 'new regionalism' in this context. This new regionalism was dependent on an architectural approach that was, let me repeat this, "penetrating into the cosmic and terrestrial elements of a region". Giedion added that "[t]he contemporary space concept [whatever it was, beyond being a formalist design concept] and contemporary means of expression can reopen a dialogue with these unchanging elements" just named. [GIEDION (1967), p.XXXVII]

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<sup>11</sup> Complaining about "[o]ur illiteracy regarding space" [ZEVI (1957) p. 22], this Italian architect stressed that it is necessary "to consider what is peculiar to architecture and therefore different from sculpture and painting." [Zevi (1957) p. 19] According to Zevi, ""the specific property of architecture - the feature distinguishing it from all other forms of art - consists in its working with a three-dimensional vocabulary which includes man. Painting functions in two dimensions, even if it can suggest three or four. Sculpture works in three dimensions, but man remains apart, looking on from the outside. Architecture, however, is like a great hollowed-out sculpture which man enters and apprehends by moving about within it." [ZEVI (1957) p.22] (footnote 11 cont. on p.173)

According to Giedion, it was up to the "creatively oriented architect" to express the 'new regionalism' that hinged on a reopened dialogue with 'unchanging' cosmic and terrestrial elements or conditions that showed specific, regional characteristics. "Instead of being regarded as hindrances", these elements should be seen as what they were: "springboards for the artistic imagination." [GIEDION (1967), p. XXXVII] The creative architects Giedion had in mind when he spoke of the new regionalists would be those who succeeded to reconcile "[i]ndividual differences in architectural structures [...] with a similar over-all approach". [GIEDION (1967), p. XXXVII] A good example was seen in those contemporary Finnish architects who "showed how contemporary [Finnish] architecture can be simultaneously relaxed, regional and universal." [GIEDION (1967), p. XXXVIII]

In the case of the new Japanese regionalists, Giedion also spoke favorably of "[t]he entry of Japan into the main stream of contemporary architecture" [GIEDION (1967), p. XXXVIII] - another indication that he possessed an image of the existing Western architectural *mainstream* as an expression of [obviously Western] "universalism."

For Giedion, the addition of new regionalist input from the Far East, Brazil, Finland, perhaps the Middle East as well, meant that "[c]ontemporary architecture has become enriched" [GIEDION (1967), p. XXXIII], but contemporary architecture was undoubtedly European or Western, that is to say, the dominant strand of architecture in the present world.

His position, in other words, his ideology, was in one word "universalist", just like that of Curtius, Auerbach etc., at the time; it was an expression of European or U.S. "universalism," that is to say, of the claim that a specific or particular socio-cultural model should be "universalized" at the same time when U.S. political and economic hegemony was asserted in much of the post-WWII world.<sup>12</sup>

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<sup>12</sup> Of course, Giedion did not consciously back U.S. hegemonism. But his 'universalist' arguments, in combination with the eminent reception accorded to them by the U.S. academic mainstream, helped the push for cultural dominance that accompanied politico-economic and military dominance. Undoubtedly Giedion was able to speak of the 'specific'. "The manner in which the new regionalism [in Japan, Brazil, etc.] is expressed by a creatively oriented architect depends entirely upon his actual tasks and their [the tasks'!] Specific needs," he would write, for instance. [GIEDION (1967) p. XXXVII] But such "individual differences in architectural structures" as would result from specific needs, would undoubtedly go "together with a similar overall approach" [GIEDION (1967) p. XXXVII] "There is universal agreement that the values lost to our period must be restored [...]" [GIEDION (1967) p. XXXIV] And: "The present space-time conception - the way volumes are placed in space and relate to one another, the

Not that Giedion's "universalist" stance did not show humanist traits. But these remained abstract. He spoke, for instance of a "universal agreement" among relevant modern architects "that the values lost to our period must be restored: the human scale, the rights of individuals, the most primitive security of movement within the city." [GIEDION (1967), p. XXXIV] But except for the latter right, denied by modern Capitalist urban planning that privileges automobile traffic at the expense of slow, much older ways of movement (deemed dysfunctional to commerce and production and the acceleration of the turn-over of Capital), his list of denied or neglected rights remains strangely un-concrete if not farcical. What, for instance, are we to make of *his profession of respect for the human scale* that must be re-established [GIEDION (1967), p. XXXIV], if the "modern skyscraper" is criticized at most in a mildly formalist manner, insofar as "[i]ts construction [...], based on prefabricated linear elements", necessitates "highly complicated procedures for calculating pre-stressed beams [...]" [that], to some extent, follow nineteenth-century linear methods." [GIEDION (1967), p. XL]

Giedion's criticism is tame (and, in fact, formalist) because he objects to the methods that underlie the construction of skyscrapers and their linearity merely because they deny "full [expressive] liberty" to the architect. [GIEDION (1967), p. XL]

"Twentieth-century structural engineering", as he saw it, would be moving in a different direction. It would strengthen "[t]he tendency to articulate every part of a structural system instead of concentrating the flow of forces into single lines [...]" Such systems can expand with full liberty in all directions. [...] Construction merges with the irrational and sculptural." [GIEDION (1967), p. XL] If we look at post-modernist examples like the new art museum in Bilbao, we know what Giedion had in mind.

Let us therefore sum up at least three characteristic traits of his ideological position as an architect:

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way interior space is separated from exterior space or is perforated by it to bring about an interpenetration - is a universal attribute which is the basis of all contemporary architecture." [GIEDION (1967) p. XXXVII]

1. Universalism which integrates the periphery (under the name of 'new regionalism', in other words, by co-opting the 'slightly divergent');<sup>13</sup>
2. Abstract categories (space, form, the linear, the sculptural)<sup>14</sup>; abstract, reductionist analysis (the socio-cultural specific of foreign cultures, people and places is reduced to unchanging cosmic and terrestrial elements); abstract goals (e.g. 'human scale' – abstractly if not empty pursued);
3. Irrationalism which arises out of a formalist (purely form-oriented and form-fetishizing) approach to architecture.

In order to underpin my claim that Giedion is an abstract thinker, I have concentrated on the way he interprets *the socio-cultural specific* in terms of "unchanging" or eternal elements particular to a given region. He illustrated his approach by referring to Japanese, Finnish, and other examples. I might add that the same tendency characterized his analysis of Le Corbusier's chapel in Ronchamp which, in Giedion's opinion, showed how this French architect was "closely connected [...] to that Eternal Present which lives in the creative artefacts of all periods." [GIEDION (1967), p. XXXIX]

But even his central concept of space is abstract: space, for him and for those who, like Frank Ching, followed in his footsteps, is no more than the volume of air – limited by walls, roofs, floors – that fill architectural structures and the 'volume' of air that in limited or limitless ways surrounds a building. To speak of space, for Giedion, was to speak of "spatial organization" of built elements or structures within limitless or undefined surrounding space. [GIEDION (1967), p. XLII]

If I criticize the concept of space as abstract and formalist despite the fact that it concretely concerns itself with proportions, direction of axes, configuration of built masses etc., it is because space so obviously is more. It is above and beyond everything *space experienced*, *space lived in* and *appropriated at a given time, in the context of an existing mode of production, by concrete people* of a concrete place *in concrete and socio-*

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<sup>13</sup> Giedion was ready to admit that "[i]n the last quarter of a century Europe has not been the only source of breezes freshening the development of contemporary architecture." [GIEDION (1967), p. XXXVI] He made this concession immediately after choosing a revealing heading or subtitle which was: "Universal Architecture"!

<sup>14</sup> Zevi mockingly said: "Line, colour, form, volume, mass, space-time, the totem words of modern art criticism, have become popular if vague conversational clichés." [ZEVI (1957), p. 19]

*culturally specific ways*. In other words, living and 'lived' experience (*le vecu*) has been omitted by the formalist analysis proposed. The subjects who appropriate space as dwellers, as direct producers, as people who reproduce themselves culturally and physically, are strangely absent. In architectural models, I know, they appear as *static, glued on, often merely two-dimensional figures*. Which is better than being left out completely. But still fatally abstract.

Juan Rodriguez-Lores and Gerhard Fehl have shown how the extremely fragmented urban land market and extremely flexible (and thus, by and large, partial rather than 'comprehensive') urban planning mutually determine or 'produce' each other. This entails that the production of towns in contemporary capitalist societies is carried out in the framework of a highly volatile, continually modified (or adapted) planning process that segments or fragmentizes urban space. Subordination of *planning* and of the *actual concrete production* of differentiated segments of town to the profit logic (or rather, to the pursuit of maximized gains realized by strategies that push up the land rent) thus erodes any comprehensive logic or overall rationality. Towns become a puzzle of areas, realized in differentiated fashion, neglected, razed, or subjected to gentrification, etc. And still, it is possible to subsume certain parts to the 'good part of town' or 'bourgeois town' whereas other parts fall squarely into the neglected, underprivileged, underserved, 'proletarian town.' Towns thus produced are, in a way, 'two towns'; their social reality as well as their built form fall either into the bourgeois or the proletarian sphere. [RODRIGUEZ-LORES (1980); RODRIGUEZ-LORES (1983); RODRIGUEZ-LORES/FEHL (1988); RODRIGUEZ-LORES (1994)] The old adage that the 'bad' or non-prestigious, lower-class part of town is "on the other side of the tracks" mirrors an old and by now, often largely outdated representation of urban space typical of 19th century and early 20th century Western cities, however. Today, the patchwork of good and bad areas, as the example of Los Angeles shows, is much more complex, much less neat and separable into cohesive zones than it was in some small and mid-sized towns in the 19th century.

There are others, like David Harvey [HARVEY (1972); HARVEY (1975); HARVEY (1982); HARVEY (1983); HARVEY (1998); HARVEY (2001); HARVEY (2006)] and Peter Marcuse [MARCUSE (2001); MARCUSE/van KEMPEN (2002)] who have also done relevant research on land economics, especially property speculation, the role of financial institutions, and overall effects on urban space. In France, Henri Lefebvre [LEFEBVRE (1974); LEFEBVRE (1991); LEFEBVRE (1996);

LEFEBVRE (2000)] was an important pioneer who suggested that we must discover and analyze social "representations of space."

Gael Louesdon has taken up this lead which is influenced by the French structuralist trend towards *discourse analysis* apparent since the 1960s. She speaks of an "ideologic discourse where space and people [l'espace et les hommes] are represented in a way that is apt to make possible the organization of space and the conformity of citizens according to a [so-called] economic imperative" which she contests.<sup>15</sup>

This is certainly an interesting way to put the concept of an "organization of space", that Giedion uses in an abstract, formalist way, into a concrete context: that of clashing social and politico-economic interests. But perhaps many architects and specialized thinkers focusing on contemporary architecture are too myopic, if not blinded by specialization, to see the point made. It is not impossible, however, to see it.

I have felt it is necessary to include the reference made to Giedion as well as the criticism levelled against those who are content, as architects and architectural critics, to view space abstractly or formalistically or in purely architectural terms, and who therefore regard the "organization of space" as a purely architectural undertaking that requires a specified number of "tools."

Coming back to the paper of Rasem Badran, I have to reiterate that I see his deep and thorough empirical probing of a specific place as extremely fruitful. It is fruitful because it makes him and us aware of something that transcends the built reality he finds in place. And it transcends it because the built reality testifies that the place was filled – and continues to be filled – with all the *living signs* (both past and present!) of a specific socio-cultural life going on; a socio-cultural life that is of course the life of concrete people (past and present). And so, together with the built structures, the people become visible. "Man and place", Badran said. If we take it as a kind of shorthand, this is okay. But what has

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<sup>15</sup> LOUESDON (2002), p. 69; translation by me (AW). It is worthwhile to read the entire paragraph which describes "un discours idéologique où l'espace et les hommes sont mis en représentation pour rendre possible l'organisation de l'espace et la conformation des citoyens à cet impératif économique qui semble depuis bien longtemps avoir perdu sa perspective domestique. Elles apparaissent plutôt comme des univers réglés où une classe politico-administrative semble réagir aux ordres de systèmes apparemment autonomes dans lesquels ses membres sont inscrits (systèmes économique, juridique, financier, etc.). Ces systèmes idéologiques introduisent un "vide entre les sujets atomisés qui obtiennent leur propre pouvoir par l'accès aux institutions" [...] - As it were, Louesdon directly and indirectly quotes from LIANOS (2001) p. 184.



been put down in short-hand needs to be spelt out concretely, in great (historical and actual) detail. It is true that an attempt in this direction is made. Rasem Badran refers to an Arabic notion of place, 'Al-makan' which, as he puts it, is "an aptitude within a space." [Badran (2009)]

The interaction between "man" and place is supposed to reveal the "constant, dynamic, private, and public status" of place. [Badran (2009)]

It is indicative of *a dialectical view that opposites are joined here*: Place is both constant and dynamic, both private and public; we can decipher both socio-cultural and technical aspects or dimensions. Rasem Badran speaks of "the materialistic, spiritual, and mental temptations which activate a social urban fabric." [Badran (2009)] Yes, an urban fabric is *activated*; it lives through and by and because of the *práxis* that enlivens it. But is that already concrete enough, if we want to understand it? Does it suffice to speak of the urban fabric as something "that is tethered by [...] spontaneous and unprogrammed social events"? And how do social events relate to the "human scale"? [Badran (2009)]

Having attempted to clarify what is implicit in "place", Rasem Badran then makes the transition to "space". He asks us to depart from the "understanding that a space is a multiplicity of places that evoke human awareness". [Badran (2009)] But is this a sufficient explanation? Frank Ching had a clear and logical, but formalist way of differentiating between place and space. Those involved in *types of discourse analysis* that are focusing on non-verbal, in this case, architectural or urban objects of research, tended to define place as an ideological construct, possibly (for some) a synonym for 'identity'. Land-economists, from the very start, preferred 'site' to place and put individual 'sites' in the context of 'urban space.'

This adds a materialistic perspective shared by both owners of urban land, 'developers', architects serving their quest to maximize land rent, and critics of the *capitalist dynamics* underlying the production of cities, respectively of *its various, specific sites* (that are 'created' in the context of a fragmented whole).

Undoubtedly, even a sensitive and tremendously creative architect like Rasem Badran cannot, in all likelihood, escape the *logic of the market* that is at work in the property market. And yet, for the architect who marvels how to realize a given 'project', there is more to it than land use and the client's wish to exploit short-lived 'chances' to realize economic gains and perhaps – in addition, at least in certain cases – to see his name and thus 'ego' celebrated by way of well-advertised ownership of a spectacular building. I was impressed by Rasem Badran's insight that in every place and thus site that he turns to, there is a complex socio-cultural reality

endowed with "characteristics that are linked to historical, environmental, climatic constraints, [but also to] habits, traditions, inherited values, [to] Religion, and language [...] that evolve a space." [Badran (2009)] Space, in other words, is a product – and he knows it. Just as nature exists nowhere or almost nowhere in a way that is unaffected by the presence of man, space does not exist "as such." It exists as socio-cultural space. It is a socio-culturally charged space that Rasem Badran discovers. It holds places, again socio-culturally charged, which will grant sites for his buildings.

Rasem Badran knows he is building in such places, within such a space embedded in history. Strangely, to my mind, he rejects linear and circular, as well as spiral models of history, preferring to allude to Einstein's theory of relativity and to the concept of time it implies. But is time in micro-physics the same as time in the 'human universe' we inhabit? I want to leave that question unanswered.

I admit that I was impressed and inspired by Rasem Badran's approach. There was also a number of questions I needed to raise. If they inspire others to dwell further on the problems Rasem Badran tackled in order to clarify the contexts and preconditions of his design work as a contemporary Palestinian or Jordanian architect, I think we will all have profited by the debate made possible during this congress.

Thank you very much for your attention.

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### Footnote 11 (cont.)

In support of this position, Zevi quotes Focillon: "The profound originality of architecture as such rests in the internal mass. By giving definite form to this hollow space, architecture creates its own universe. Doubtlessly external volumes and their profiles interpose a new, entirely human element on the horizon of natural forms to which conformity and harmony always add something of the unexpected; but, if you think of it, the greater wonder is the conception and creation of a kind of reversal of space. Man moves and acts on the exterior of every object; he is always outside, and to go beyond surfaces, he must break into them. The unique privilege of architecture, among all the arts, whether in creating houses, churches or interiors, is not to shelter a convenient emptiness, but to construct an interior world in which space and light are measured according to laws of geometry [...]" [ZEVI (1957) p.160]

This is of course an approach to space that remains totally encapsulated in a theory of art. When Zevi asks what space is for today's architect, he answers this question without considering socio-cultural or politico-economic significations of space.

Insofar, Zevi's position resembles that of Giedion. He differed from Giedion in that he critiqued Giedion's 'rationalist' preference for functionalist 20th century architecture and the international style that was apparent in the first edition of *Space, Time and Architecture* (1941). Zevi opposed this by advocating an 'organic architecture'. Giedion later on moved in a similar direction, as did Corbusier with buildings like the church in Ronchamps.

The formalism implied in Zevi's position is not immediately apparent because he does not fail to admit at least abstractly that "[a]rchitecture has responded to such a variety of needs that to describe adequately its development would mean writing the history of civilization itself, recounting the multiplicity of factors which make up that history and showing how these factors, with the predominance now of one, now of another, have acted in concert to give rise to various conceptions of space." [ZEVI (1957) p. 73] But Zevi fails to concretely analyse, at least in a single case and historical context, the material socio-cultural and politico-economic factors that played a role in the production of "a given context of space." In the last analysis, he refers us to the "creative personalities who, on the basis of a given conception of space or of a certain taste in architecture, have produced *acknowledged masterpieces* [emphasis by me (AW)], the formal content of which has become part of the architectural language and taste of the period following their own." [ZEVI (1957) p. 73]

The idealist position of Zevi is revealed when he approvingly quotes Vitale according to whom "the aim and end of architecture" is "[t]o construct in space". "[B]ut space is anti-spirit; it is pure extension, absolute and complete realization [...]" [VITALE (1928), quoted by ZEVI (1957), p.247].

Let me mention here in passing that the concept of "acknowledged masterpieces" is not as innocent as it may appear to many of us. It is inextricably connected with the idea of a "canon." And in actual critical practice – whether with regard to architecture or to literature – the definition of the accepted canon has been and still is arrogated by Western scholars and moreover, by Western dominant media, who tend to equate Western values, tastes, and aesthetical judgments with "universal" ones which they tend to impose, often successfully, on the rest of the world. Debates as to what belongs and what does not belong to the 'accepted canon' thus are more or less the job of insiders culturally anchored in Western hegemonic and often elitist traditions.

## CHAPTER NINE

### AN ARCHITECTURE OF IDENTITY: HASSAN FATHY AND RASEM BADRAN

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In a world that seems increasingly homogenous and devoid of difference, there exists a rapidly growing, surprisingly under-estimated and little appreciated interest in the overt expression of group identity. This has been made manifest, in architecture and urban planning terms, by a selected group of designers of the built environment, in a number of places at a variety of scales, most notably in the region formerly known as the Middle East. This area is now more frequently referred to as “West Asia” by residents and others who are sympathetic to the geopolitical changes that have taken place there, reflecting a shift away from Greenwich as a reference point, and toward Beijing instead.

#### **Hassan Fathy and Rasem Badran**

The relatively recent search for identity in this region started with Egyptian architect Hassan Fathy who set out to establish another frame of reference for the Arab Islamic world, as a young architect, as an alternative to the exclusively western model that had been presented to him at university. This *Bauhaus* based direction was prevalent in Egypt when he graduated in the mid 1920's and continues today throughout the region as a Modernist-inspired pedagogical system that associates *that* philosophy with progress.

Fathy went on to systematically create, or reconstruct, as he saw it, what he claimed to be an authentically Egyptian tectonic language, based on past typologies that he uncovered through painstaking research into the built history of his homeland. Once he had done so, he consistently used

this architectural language throughout his long career until his death in 1988.

In 1973, the publication of the memoir of his building of the community of New Gourna on the East bank of the Nile near Luxor, in the late 1930's, by the University of Chicago Press, made him something of a celebrity among ecological advocates, since it appeared at the same time as the first of the two "oil shocks" that energized that movement. His western audience, however, was, and still is, limited to a rather small group of academics who are able to fully appreciate the cultural and political issues he describes.

During his long and difficult professional journey, which was complicated by those issues, Fathy attracted several committed Egyptian disciples, such as Abdel Wahed El Wakil, Ahmed Hamid, Rami El Dahan, Soheir Farid, Omar Al Farook and Abdelhalim Ibrahim Abdelhalim, among others. But for various reasons, in each case they have not been able to effectively disseminate Fathy's principles and message very widely.

Jordanian architect Rasem Badran, on the other hand, who never worked with the Egyptian master, has managed to channel Fathy's philosophy and has become a powerful advocate of his theories, having an effect on important policy makers at the urban, regional and national level throughout the Arab-Islamic world. Due to the rising influence of that sector on global architecture, because of its vast financial resources and the opportunities that it has offered for European and American firms to become involved in projects there, Fathy's ideas, as perpetuated and expanded by Badran, have now reached a much wider western audience than Fathy ever dreamed of.

Superficial, uninformed, and hackneyed western renditions of the tectonic language that Fathy created and that Badran has perpetuated and expanded upon, are now popping up throughout the Arabian Gulf.

## **The Clash of Civilizations**

To fully understand the implications of this course of events now unfolding throughout West Asia and the oil rich Gulf States in particular, it is necessary to briefly present an admittedly selective recent history of the emergence of identity.

Arguably, the best place to start is with an article by Samuel Huntington entitled "The Clash of Civilizations" that first appeared in *Foreign Affairs* in 1993, and then emerged in a book-length form three years later. In each of these, Huntington, who died in late December, 2008,



argued that future global conflicts will not be between nations, but will be defined by cultural, rather than ideological or economic issues. In his lexicon, there are eight of these, which are the Japanese, “Sinic”, Western (Europe and the United States), Islamic, Hindu, Slavic, Latin American and African ‘civilizations’.<sup>1</sup> In these civilizations, he argued that the definition of identity will become increasingly important in the future, in both ethnic and religious terms, for several reasons. The six major ones are that:

- 1- In an even more substantial way than the nation state, civilizations have developed over an even longer period of time, based on a common history, language, culture, set of recognizable traditions, and religion.
- 2- As globalization intensifies, and interaction between nations increases, members of these civilizations become more aware of these commonalities. As Huntington describes this process: “The interactions among people enhance the civilization consciousness of individuals, that in turn invigorates historical differences and animosities.”<sup>2</sup>
- 3- People have been separated from their identification with a specific civilization through a seemingly inexorable process of social and economic change. Huntington argues that these processes have weakened the status of the nation state as a basis of identity as well.
- 4- When Huntington wrote his article and book, it seemed that the west was at the zenith of its power, and he believed that this resulted in a reflexive “return to roots” phenomenon in non-western countries, including what he calls the “Re-Islamization” of West Asia.
- 5- Cultural differences are less mutable and less easily compromised than economic or political conflicts.
- 6- Economic regionalism is on the rise, and it is rooted in cultural commonalities.

## **Globalization and Its Discontents**

Several important changes have taken place since Huntington published this multi-faceted hypothesis. The first and most obvious shift is that the distinction that he believed to exist between religion and ideology

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<sup>1</sup> Samuel Huntington; *The Clash of Civilizations*, Foreign Affairs, 1993, p. 38

<sup>2</sup> *Ibid.*, p. 39

has now been eradicated in some instances, with consequences he could not have foreseen. A second, substantial change, that has been even more complex and far reaching, has been the transformation of what he termed a “process of economic modernization” into a phenomenon now known as globalization.

Globalization, which is now generally considered to be an economic theory, has evolved so quickly that it has moved beyond being the cause of a heightened sense of identity among the “civilizations” that Huntington listed, to having been unravelled by such identity. The course of that rapid evolution requires further explanation because it is extremely relevant to the present discussion about the architectural expression of identity, as well.

Peter Marcuse, among others, has criticized Globalization as having become a “non-concept” since it now covers, in his opinion, things as diverse as: “information technology, capital flows, the Disneyfication of culture, mass marketing, global warming, genetic engineering, the power of multinational corporations, the international division of labour, the reduced power of the nation state, Postmodernism and Post-Fordism”.<sup>3</sup>

What he does not contest, however, is that it is directly related to capitalism and its geographical expansion as well as the growth of information technology, and must be more narrowly defined. In his view, globalization consists of an exponential growth in economic power, based on the increased speed of communication, made possible by electronic and digital technology. This includes “the increased speed of transportation (of both people and goods)” that “facilitates the flexibilization of production and automation”.<sup>4</sup> Within a decade of the publication of *The Clash of Civilizations*, Globalization had achieved something of a cult following among economists, politicians and academics, who collectively seemed to feel that it was a force unto itself. They argued that, if left to operate in its own way, it would bring progress and prosperity to the entire world, and become the rising economic tide that would raise all ships, both developed and undeveloped nations alike. They predicted that economic alliances would replace national boundaries as the power blocks of the future, and that the nation state as a human construct was a redundant idea.

The status of Globalization as an economic theory reached its peak in 1995, when the existing trade treaty known as the General Agreement on Tariffs and Trade (GATT) was scrapped and replaced by a more centralized body intended to deal with global issues, called the World

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<sup>3</sup> Peter Marcuse, *The Language of Globalization*; *The Monthly Review*, Vol.52, No.3, 2000, p.16

<sup>4</sup> *Ibid.*, p. 17

Trade Organization (WTO).<sup>5</sup> But, within a short period of time several monumental events revealed the weakness in this theory.

First of all, increased shortages of non-renewable resources made it increasingly obvious that such commodities are place-specific and are consumed by individuals in those places, rather than being controlled by stateless multi-nationals.

Secondly, a series of crises in Rwanda and Bosnia demonstrated to the entire world that Globalization was completely irrelevant in instances of such violence.

Thirdly, the economic crisis now referred to as the “Asian Flu” of 1997, following on from the threatened bankruptcy of several Latin American countries shortly beforehand, demonstrated the weakness of international lending institutions in dealing with such widespread problems. In that instance, Prime Minister Mahathir Mohammed of Malaysia defied conventional wisdom and pulled the national currency off the market, made it nonconvertible, and pegged it just low enough to favor Malaysian exports.

Fourth, the national and international response to the events of September 11, 2001, in New York City, demonstrated that nationalism is still alive and well.<sup>6</sup>

Since that time, the global financial meltdown of 2008, which started with faulty mortgage lending practices in the United States, has not only confirmed the intricacy of global finances and their extensive differentiation, but also the strength of each nation state in dealing with this crisis in an individual way.

What these, among other lesser events, have made obvious is that Globalization was nothing more than what one observer has keenly described as the “re-conceptualization of civilization through the prism of economics,” reducing culture to a purely commercial exchange.<sup>7</sup>

They each proved that identification, to either a particular “civilization” in Huntington’s terms or a nation state more than economics, is really what matters most to people in the end.

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<sup>5</sup> John Ralston Saul, *The Collapse of Globalism and the Rebirth of Nationalism*, *Harpers magazine*, March 2004, p.64

<sup>6</sup> *Ibid.*, p. 64

<sup>7</sup> *Ibid.*, p. 64

## **The Significance of the Transformation of Globalization**

The significance, and ultimately the sublime paradox involved in the rapid growth and eventual transformation of Globalization (as a theory as charted briefly here) then, in the light of Huntington's thesis is that what he refers to as a "modernistic economic process" started out as a catalyst for the growth of identity, but it was eventually the power of collective recognition that proved the undoing of Globalization.

### **The Conflict between Identity and Techno-Economic Forces**

Manuel Castells is another influential contemporary social philosopher who, like Peter Marcuse, has attempted to titrate the nebulousness of the term Globalization, and has also settled on its predominant combination of techno-economic attributes as its defining feature. He believes that Globalization today involves what he calls "the network society" which has been instrumental in the restructuring of capitalism using information technology. Castells has expanded on that definition however, by more tightly bundling Globalization together with the growing phenomenon of identity. He posits that these two forces are now in direct conflict, and helpfully defines identity as "the process of construction of meaning on the basis of a cultural attribute, or as a related set of cultural attributes that is given priority over other sources of meaning."<sup>8</sup>

He carefully differentiates identity, as a new emerging force, from traditional social roles, such as father, mother, son or daughter, and separates it further into three distinct categories. These are "Legitimizing identity" used by social institutions to rationalize their authority, "Resistance identity," adopted by groups with a common history, geography or biology, who have been stigmatized by a more dominant social group or groups, and finally "Project identity" which involves the group transformation of an existing social structure.<sup>9</sup>

Since the second category of "Resistance identity" involves what Castells categorizes as "a sense of alienation" and "resentment against unfair exclusion, whether political, economic or social" and a defensive mentality in general, it is very appropriate for the current discussion about

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<sup>8</sup> Manuel Castells : *The Information Age: Economy, Society and Culture*, Volume II: *The Power of Identity*, Blackwell Publishing, Oxford, 2004, p.7

<sup>9</sup> Hassan Fathy, "An Ekistic Approach to Roofing" *Ekistics Journal*, Athens Center of Ekistics, Athens, Greece, 1974, p.23

an architecture of identity aimed in part as an alternative to the dominant western model.

## **How Can Architecture of Resistance Identity Be Created?**

With this background in mind, it is now possible to discuss the ways in which Hassan Fathy, as well as Rasem Badran, have set about to create an alternative architectural identity related to the idea of “cultural singularity” that Castells has analyzed. They have done so in such a way that it contains the level of meaning that is required for collective acceptance by the cultural group they address today.

### **Hassan Fathy**

In the first instance, Fathy’s professional and philosophical journey was entirely bound up in the conditions that existed in Egypt at the time he was born, on March 23, 1900, near the Delta village of Tanta, close to the Mediterranean coast. At that point, Egypt had already been a British colony for some time. His father, who was a moderately wealthy landowner, was Egyptian; his mother was Turkish. After a private, Lycee-based education, he entered Cairo University as an Agricultural major in 1922, but changed to Architecture after he found that he had no interest in farming. The majority of his instructors were British, who followed an *École des Beaux Arts* curriculum, based on Classical principles and prototypes.

After he graduated in 1926, Fathy opened his own practice in Cairo. His first project, for a private school in Talka, which he completed in 1927, was typically *Beaux Arts* in style, with classical columns, pediments and details. Over the next ten years, he designed a number of private homes and offices in Cairo, gradually shifting away from his *Beaux Arts* training toward a Modernist language. The flat roofs, severe angular forms, industrial materials and lack of ornamentation common to all of his projects indicate a more than passing familiarity with changes then taking place in Europe and cohesively developed by the *Bauhaus* in Dessau, Germany, at that time.

### **A Sudden Rejection of Western Influence**

As a result of his association with an intellectual circle of artists, musicians, writers and other architects who were attempting to channel the nationalistic fervour that was mounting against colonial rule in Egypt at

that time, Fathy made a dramatic about face in his work in 1936. Several intellectual dissidents who had either a direct or an indirect influence on him echoed his sentiments in other art forms.

One of these was Taha Hussayn who first attended Al-Azhar University for twelve years before entering Cairo University in 1914. He then attended the Sorbonne before returning to Egypt in 1919. His course on ancient history at Cairo University and the publication of *Fi al-Shi'r al Jahili* or, "On Pre-Islamic Poetry", were very controversial. He, like other members of this intellectual circle, was a *Pharaonist*. He believed that Egypt had a special place in Pan Arab history. He was joined by others, such as artist Mahmoud Mukhtar who initiated Neo-Pharaonic sculpture and renewed the idea of figurative art in the nation.

The most famous member of this circle, other than Fathy, is Nobel Prize winner Naguib Mahfouz, who was born in 1911 and also graduated from Cairo University in 1934, with a degree in Philosophy. Inspired by the wave of excitement that swept Egypt and the rest of the world when the tomb of Tutankamen was discovered in Luxor in 1922, Mahfouz wrote the first of more than fifty novels based on Pharaonic themes. It is called *The Struggle of Thebes*, which is based on the Hyksos invasion of ancient Egypt. It established a pattern of the use of thinly veiled allegory as a means of political commentary related to the British occupation of Egypt.

Hamid Said, who was Fathy's close friend as well as a supportive client, founded The Friends of Art and Life, which discussed these issues, based in a house that Fathy designed for him in Marg, outside Cairo. He vividly recalls what he has described as a sense of impending catastrophe that prevailed within this intellectual circle just prior to World War II. In an echo of Huntington's use of civilizations as social categories, Said recalls that the main subject of conversation, when Fathy attended meetings at the house, was the perception of a general decline in the level of civilization within the country since Pharaonic times.<sup>10</sup>

In 1936, Fathy exhibited a series of uncommissioned architectural designs in a gallery located in Mansouria, which is now a suburb of Cairo. They are remarkable in many ways, most notably as a uniform proclamation of difference from *Bauhaus* Modernism. The best way to describe the designs is that they represent lyrical fantasies containing references to various parts of Egyptian history, concentrating on the period after Islam was introduced into the country in 626 A.D. His apparent objective was to declare independence from foreign sources and to find an alternative, authentic method of Egyptian expression instead. The

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<sup>10</sup> Interview with James Steele, Marg, Egypt, 1988

exhibition was covered by the press and was very controversial. Reactions to it ran the gamut, from derisive disbelief through concern about Egypt's image as a developing nation should the images be published abroad, to moderate support.

Undaunted by the *furore* that his drawings had caused, Fathy started to solicit clients who were willing to build these new, highly nationalistic designs, and found several among the wealthy, landowning class of which he was a part. Owners of large agricultural holdings, similar to those of his own family, were typically absentee landlords, using tenant farmers to care for the land and oversee production. These were ideal clients because they only visited their properties occasionally to collect revenue. They needed large houses to accommodate them while they were there and to serve as symbols of their authority when they weren't, and they did not want to spend too much money on construction.

### **Finding an Identifiable Spatial and Formal Language**

After a structural failure occurred on one of these projects, Fathy intensified the research that he had started several years before the Mansouria Exhibition, concentrating on the spatial typologies and construction methods that had been used in the Manzil, or great houses of Medieval Cairo. Because his areas of focus and the selective thought process that he used in approaching them are critical to the form of identity that Fathy created, these typologies and construction methods require some brief explanation.

In his effort to derive an authentic Egyptian architecture, Fathy concentrated on the Fatimid, Mamluk and Ottoman palaces in the medieval quarter of Cairo. The main sources of information about them that were available to him, other than the painstaking physical surveys that he carried out of each one, were Orientalist classics such as the *Description de l'Egypte* and Emil Pauty's *Les Palais et les Maisons de l'Epoque Musulmane au Caire*, among other texts available mainly from the Institut Français Archéologique Orientale (IFAO) in Cairo.

Fathy bought one of these old palaces himself in 1936, known as the Beit Labib and restored it. He lived on the top floor until his death in 1988. He discovered many similarities in the houses he studied, mainly the Beit Suheimi, Beit Kathoda and Beit Gamal adin Dahabi, which were within walking distance of the Beit Labib.

These similarities are:

1. Orientation toward the prevailing breeze which is cooler when it comes in from the desert, starting at sunset.
2. The use of courtyards, typically two of which are organized on axis: the one closest to the source of the prevailing breeze is planted and the second is paved. The planted courtyard trapped the cooler night air in the surface area of the plants and trees, releasing it to the paved courtyard by convection current as the sun moved overhead and heated the paving stones. Servants often splashed water on the paved courtyard at dawn to accelerate this process.
3. The use of an opening between the two courtyards, called a taktaboosh which allowed this convection current to move from one to the other.
4. A room spanning over the taktaboosh, with floor vents that allowed some of the cool air to be directed into it, where the family would usually meet for the mid-day meal.
5. A raised open loggia, facing the prevailing breeze at the end of the second, paved, courtyard called a ma'qaad, which was the coolest place in the house in the late afternoon, where the family would sit for the evening meal at the end of the day.
6. A tall *windtower*, called a malkaf, which directed the prevailing breeze into the main, formal reception area of the house.
7. The reception room itself, called the qa'a, which was restricted to male visitors.

### **The Qa'a as an Example of Typological Appropriation**

The qa'a is the perfect example of the way in which Fathy appropriated traditional archetypes. He spent a great deal of time and effort researching this particular typology and wrote several articles about it. The qa'a made its first appearance as an open courtyard flanked by opposing "T" shaped Iwans, or roofed loggias in the residential quarter of the Okhaider Palace which was built by an Abbasid prince in the eighth century near Kerbala, Iraq. It re-appeared again in Egypt four centuries later, as the core of the tightly compressed houses in Fustat which served as the port city for AlQahira, or Cairo, after possibly undergoing further development in the Hajj cities of the Hijaz region of Arabia due to the external influence of pilgrims who visited that area.

In Fustat, the position of the open, central courtyard, seen in the Okhaider Palace remains intact, but the "T"-shaped spaces on either side began to become more simplified in response to the need to adapt to urban conditions. In the course of this change, a fountain was added to cool the



air coming into the courtyard. In its final form, in Fatimid Cairo, the qa'a became completely internalized as a result of the increased density and noise of the city. The flanking iwans, which eventually dropped the cross bar of the "T" to become a simple alcove on each side of the towering covered central court, ultimately created an integral, unified, architectural component that was perfectly suited to the social needs of the merchant class of the growing city of Cairo.

As adapted by Fathy, the qa'a took on a new significance as a formal residential reception area, as he scaled down the high central *windtower* of the Fatimid, Mamluk and Ottoman houses to allow it to adapt to contemporary needs. While the first use of this composite form in such houses as the Hamdi Seif al Nasr villa in Fayyum demonstrates that Fathy was initially inspired by such qa'a's as the one in the Beit Kathoda, later sketches show a more subdued approach.

## A New Construction System

At the same time as he was involved in making these typological appropriations from the remaining examples of Cairene Manzils, or those he could find written histories of, Fathy was also actively searching for a construction method which would convey the same degree of cultural authority he believed he had found in medieval Cairo. This part of his search is excitedly documented in his book, *Architecture for the Poor*, where he tells how, at the prompting of his brother Ali, he went to Upper Egypt to visit the Nubian settlements around Luxor and Aswan.

His animated re-telling of that journey in *Architecture for the Poor*, which was written nearly three decades after the fact, still conveys the same sense of discovery, as well as his initial excitement in finally finding an indigenous structural system that would allow him to build with mud brick without the need of scaffolding or centering, and hence for imported materials such as steel and concrete. His enthusiasm for the system he found in Nubia, which eliminated dependence on foreign materials and also reduced construction costs to zero if a co-operative self-help building method was used, is totally understandable.

Fathy was also impressed by the natural understanding of complex engineering principles that were evident in the techniques used by the Nubian masons. As he later wrote: "It is remarkable to find that the builders of these vaults were working according to the laws of statics and the science of resistance of materials with extraordinary intuitive understanding. Earth bricks cannot take tensile or bending stresses, so they make the vault in the shape of a parabola, conforming to the bending

moment diagram, thus eliminating compression. In this way it became possible to construct the roof with the same earth bricks as for the walls.”<sup>11</sup>

## **Nubian Vaults**

The construction of these vaults begins with the building of a kick wall that extends up to the full height of the space. Once this back wall is complete, the masons, who typically work in teams, draw a freehand outline of a parabolic vault in mud mortar on this wall as a guide. This is an extremely important part of the construction procedure since the correct curvature is crucial to structural stability. After the guideline has partially dried, the masons dress the rough edges with an adze, before applying the first course of mud brick to the kick wall itself. These bricks have a much higher proportion of straw to mud in them, which makes them lighter, and the face of each brick is scored by the masons with their fingers, while it is still wet in the mould, to give them greater adherence to the mud mortar. A starter brick is then laid up soldier fashion at the base of the vault line on each side, and mortar is packed on top of it, which is then shaped with an adze to make a wedge that is thick at the bottom and thinner at the top. This establishes the angle of incline for each of the courses to follow, making sure that they lean against the kick wall in compression, rather than being perpendicular to the ground, which would make the entire vault collapse. As each new course is added, the masons continue to make sure that the base of the vault is further out from the wall than the peak, and that the joint lines between each row of bricks are staggered. This purposeful incline of the vault as it is erected accounts for the sloping edge of the front of Nubian houses.

These houses can be predominantly found today in the village of Aboul-Riche, near Aswan, which is one of the last remnants of a culture that once covered the area flooded by the Aswan High Dam and Lake Nasser. They are examples of a way of building in mud brick that can be traced back to the time of the Pharaohs.

## **A Perceived Sense of Authenticity**

With the completion of his research into the ancient structural technique of building in mud brick that Fathy achieved in Nubia, added to the extensive studies he had previously done on the typological aspects of the medieval Cairene house, he believed he had finally arrived at a truly

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<sup>11</sup> Hassan Fathy, *ibidem*, p.23

authentic synthesis that was identifiably Egyptian and might also serve as a Pan-Arab architectural language, separate and distinct from western influence.

A series of houses that he designed between 1937 and 1940, using this synthesis, brought him to the attention of the Department of Antiquities, which was looking for a solution to a public relations problem that had occurred during that time. A large Pharaonic basalt statue, which was detected and uncrated by customs officials at the port of Alexandria, was traced back to the village of Gourna, built on the mountain slope directly above the Valley of the Kings and Queens in Luxor. The Gournii had long been suspected of tomb robbery, but the scale of this incident, which was picked up by the international press, forced the department of Antiquities to act. They decided to relocate the village several kilometers to the east, toward the Nile, and Fathy's self-help mud brick system appealed to them because it was inexpensive and fast.

## New Gourna

Only a portion of this new village, Gourna el Gedida, which was intended to re-house more than 5000 people, was ever built, because of repeated sabotage by Fathy's reluctant clients combined with bureaucratic lethargy that seemed to increase once the public *furor* over the theft of the statue had died down. Fathy's own recounting of the frustrations he experienced in his idealistic effort to complete New Gourna first appeared as *Architecture pour la peuple*, in 1963, republished as *Architecture for the Poor* in 1973, thirty years after work on the village had ceased.

The project was ostensibly a failure, but the portion of New Gourna that remains represents the most comprehensive expression of Fathy's ideals and tectonic language that can be found today.

Having been thwarted on the New Gourna front, Fathy turned his attention toward the design of a series of prototypical schools, which were built in mud brick using his layered system at both Fares, which is on an island in the middle of the Nile, and at Edfu in 1957.

He felt that these schools finally proved the efficacy of his system, and was shocked when he heard what he considered to be misrepresentations of their cost, which was extremely low. This along with continuing resistance from what he termed "the contractor establishment" which he claimed was threatened by his self-help system, led him to accept an offer to join Doxiades Associates in Athens, and he left Egypt in 1957.

## **Baris**

He returned five years later, at the invitation of the Egyptian Administration of Desert Development to design another village at Baris, almost at the centre of the country, near the Kharga Oasis, due to the discovery of a huge well there under the desert floor. Unlike New Gourna, however, the clients for what was intended to be a primarily agricultural village had not yet been determined. Lacking this personal connection, he focused almost exclusively on climatological issues since the context for the project is extremely harsh. Temperatures in the summer at Kharga can exceed 48 degrees Celsius (118 F), and there was no immediate hope of mechanical air-conditioning, this put his use of Cairene spatial typologies and Nubian construction techniques to the test, and they proved to be extremely effective.

His final design is a testimony to his complete assimilation of the principles he had uncovered. But Baris, like New Gourna, was never completed. In this instance, the “Six Day War” cut construction short due to the fact that resources were urgently needed elsewhere, and it was never renewed.

## **Dar Al Islam**

A third, and final opportunity to finally realize his ideal synthesis of Arabian, and specifically Egyptian typologies and Nubian structural techniques occurred in 1979, when Fathy was asked by the Dar al Islam Foundation to build a village in Abiquiu, New Mexico, as a retreat for Muslims in the United States. The site is an eleven square mile property in the Chama River Valley, which is topographically similar to arid areas that Fathy was familiar with in the region in which he practiced. The plan is based on a village for one hundred and fifty families and includes a mosque, madrassa, riwaq, hamam, and khan, as well as housing.

Once again, the plan was not completed, in this case due to unexpected cost overruns, due to restrictive local codes and upgrades demanded by the prospective American residents; a lifestyle factor that Fathy had not anticipated.

## **A Semiotic, As Well As Functional System**

Fathy completed relatively few projects during his long career, the majority of which were private residences for wealthy clients. This is the ultimate paradox for the architect who is best known internationally as the

proponent of an “Architecture for the Poor”. His principles, however, are best demonstrated in the unrealized projects of New Gouna, Bariz and Dar al Islam. They show his adaptability and ability to create semiotic systems capable of eliciting an approving response from those who are either part of his own culture, or sympathetic to it. His forms provide the sense of identity he sought even though they may be analysed as being of mixed origins.

## **Orientalism**

One method of analyzing them is provided by Edward Said who wrote *Orientalism* in 1978; five years after *Architecture for the Poor* appeared. In his book, Said defines Orientalism as a multifaceted episteme with the following attributes. It is a created body of theory, practice and system of knowledge that distributes geopolitical awareness into aesthetic, scholarly, economic, sociological, historical and philological texts. Its intention, according to Said, is to “understand, control, manipulate and even incorporate what is manifestly a different world”<sup>12</sup>

Said goes on in his definition by saying that Orientalism has both a genuine, didactic interest in the culture it studies and a political agenda, that it is “a structure of cultural domination”.<sup>13</sup>

It is, finally, a western approach to “the Orient” which is approached as a topic of learning, discovery and practice as well as a font of images and vocabularies.

Later in his book, Said identifies what he terms “a set of devices” that Orientalists use in this approach. These, in summary, are:

1. Exteriority. The tendency to objectify the East rather than doing a substantive study of it, which is evident in style.
2. Second Order Knowledge. A reliance on fabricated mythology
3. Didacticism. Which is the tendency to impose order on a certain representation, and then to maintain that this ordering system is the result of the use of the scientific method.
4. Generalization. This is the final result of the use of Didacticism, since it leads to the quantification of cultural nuances, among others, which are replaced by uniformity.
5. Reducing Truth to Text. The appeal to the tradition of knowledge contained in text.

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<sup>12</sup> Edward Said, *Orientalism*, Vintage Books, New York, 1978, p.64

<sup>13</sup> *Ibid.*, p.65

6. Typology. The use of taxonomy to categorize or classify the natural world as an intellectual process introduced during the Enlightenment. It was led by classifiers, such as Linnaeus in Biology and Botany, and transferred into architecture by Laugier, Durand and Sitte. It was extended into the Orientalist canon to include cultural and ethnic generalizations. One of these is what Said refers to as *ahistoricism* or, “the declaration of essential character, or intangible essence that can be determined in each race.”<sup>14</sup>

### **Both Fathy and Badran Rely on the Use of Typology**

While many of these descriptions are uncomfortably reminiscent of Fathy’s approach, typology is the most germane to our discussion here. The device of typology is the sharp point at which Orientalism confronts the Rationalistic strain of Modernism and the direction created by Fathy and used by Badran, as well. Differentiating between its use in the western Rationalist tradition and Fathy’s implementation of this method of classification is an essential part of understanding how both he and Rasem Badran have set about to formulate an alternative identity in their architecture. Both Fathy and Badran go far beyond the use of purely physical attributes in their selection of types. However, the fact that they both start with them is an ironic testimony to the difficulty of achieving true authenticity today.<sup>15</sup> Hassan Fathy was educated in the western, Beaux Arts method and had to primarily rely of French and British sources for his research on Cairene houses. And so another essential ironic aspect of his work is that the architect who is now regarded as the source of a new Arab-Muslim identity, had to primarily rely on western sources to create it.

### **Rasem Badran**

Rasem Badran, who is unquestionably the most influential interpreter, and re-interpret, of this identity, was born in Jerusalem in 1945. His father, Jamal Badran, was a master of Islamic art and famous as both an artisan and craftsman. He was responsible for the restoration of the wooden minbar of Salah ad-Din, which had been tragically burned when

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<sup>14</sup> Ibid., p.132

<sup>15</sup> See James Clifford, *The Predicament of Culture: Twentieth Century Ethnography, Literature and Art*, Harvard University Press, Cambridge, MA. 1988

the Al-Aqsa Mosque was damaged in 1969, among many other important historical works.

In 1948, Rasem Badran moved with his family from Ramallah to Damascus, Syria, and then to Tripoli, Libya, after his father was hired by UNESCO to consult there in 1953. While in Tripoli, the family lived next to Wheelus Airforce base, and Rasem was so fascinated by the aircraft that flew in and out of it that he made extensive sketches of them and dreamed of becoming an aerospace engineer. He applied to a University in Egypt with the intention of majoring in either Aerospace Engineering or Industrial Design, but did not meet the entrance requirements and so he applied to the Technical University of Darmstadt, Germany, instead, and was accepted.

He was caught up in the profound changes there at that time, as part of those that were taking place throughout the west in the 1960's, describing them as "the outcome of democracy and the legacy of the Enlightenment and the scientific and Industrial revolution that followed it. The 1960's was an era of resistance and the rejection of conventional, systematic academic systems. We refused to participate in business as usual."<sup>16</sup>

After graduating from the Technical University of Darmstadt, Rasem Badran went to West Jerusalem to study that part of the city before returning to Amman, Jordan, where he practices today. He has proven to be very adept at winning competitions, in large part because of his extraordinary artistic ability and the power of his sketches. But another major factor in his success has been his ability to analyze each context in which he will be working through a systematic process that involves sketching, photography and other methods of field study that have proven to be effective for him. They have allowed him to internalize each setting, in a thorough way, before he even begins the design process.

In 1968, he won a competition for the design of the Al Beit Foundation, the Royal Institute for Islamic Studies, in Amman. This is one of the first instances of the implementation of the kind of historical analysis of the architectural heritage of Islam, in his attempt to determine a local, regional identity related to that wider reality. He then won another competition for the design of the Baghdad State Mosque. Neither of these was realized, but his third win, for the design of the Great Mosque and Palace of Justice in the historic Qasr al Hukm district of Riyadh, has been built, and won him the Aga Khan Award for Architecture, and the worldwide recognition that comes with it, in 1995. Since then he has designed

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<sup>16</sup> James Steele, *The Architecture of Rasem Badran: Narratives on People and Place*, Thames and Hudson, London, 2005

and seen the realization of a multitude of projects of all scales throughout the region, and he has revelled in discovering the differences within the similarity of an Islamic background, in each of them.

While he has obviously been influenced by Hassan Fathy, and uses a similar, typologically based process to arrive at a design concept as Fathy did, Badran has managed to reach a much wider audience than Fathy ever dreamed of for several important reasons. The first of these is what must, for want of a better term, be called his universality. Fathy was urbane and travelled often, but Rasem Badran was educated in the west, and yet still retains a passionate desire to express his own cultural identity, using the techniques he learned in university. He has now designed projects in Saudi Arabia, Egypt, Kuwait, Iraq, Jerusalem, Morocco, Yemen, Lebanon, Qatar and other parts of the United Arab Emirates, and Malaysia in addition to his own country of Jordan, among others. In each case, he has managed to extract the essence of local identity by exhaustively researching local history, cultural patterns and environmental peculiarities.

A second reason he has found wide acceptance is his willingness to accommodate technology to the extent that it does not compromise his search for regional identity within the parameters of a wider focus.

This willingness includes such things as the augmentation of the sound and time-tested techniques for environmental amelioration, such as the use of the taktaboosh, malkaf and ma'qaad that Fathy used in his architecture, with mechanical means of heating and cooling as well as other telluric materials, like clay brick instead of mud brick alone.

The third reason for his wider acceptance has been Badran's ability to derive living typologies from his historical research and to apply them to his design concepts, rather than just being restricted to a fixed set that was developed during the medieval period.

## **The Great Mosque and Palace of Justice in Riyadh**

All of these approaches and more are evident in the design of the Great Mosque and Palace of Justice in Riyadh, which is the project that arguably presents one of the clearest records of his approach. The client is the Riyadh Development Authority which is a municipal office responsible for the planning and redevelopment of the centre of the old city. The brief they created included a mosque for 20,000 worshippers, divided between a covered prayer hall for 14,000 and an outer courtyard for 6,000 people. The new mosque was intended to replace an existing one that had in turn been built over the ruins of an ancient one on the site, indicating the great symbolic significance of the area. It contains the Musmak Fort, which



played a central role in the foundation legend of the nation. King Abdul Aziz Ibn Saud captured it almost single-handedly, which eventually led to his becoming ruler and uniting the nation. In addition to being at the core of the capital of the Islamic heartland, the site is layered over with many of these kinds of memories, and Rasem Badran was determined to uncover them. He used every means at his disposal to uncover and express them.

The complex speaks to history and memory, but the Riyadh Development Authority wanted it to also reflect contemporary Islamic culture and to be a new urban focal point in one of the fastest growing cities in the world. Following a pattern that he used before and has intensified since, Badran immersed himself in the history of the region and its architecture. He uncovered rare, old photographs of the previous Mosque and Justice Palace, and among other things, found that a bridge had connected the two, and that the tented stalls of the suq or market were directly attached to one wall of the old mosque. He reconstructed the proportions of each building, paying special attention to the relationship between the sahn and the covered area of the prayer hall in the old mosque and the details of its beautiful, massive hypostyle structure, which were all built in mud brick.

He also found a historic mosque near the village of Darriyah, which is the ancestral home of the Saud family, near the Wadi Hanifah. This old mosque is a classic example of the Najdi style of this region, and surveying it helped Badran to understand its singular scale, proportion and use of detail. He especially focused on the minaret and the way it is engaged to the surrounding wall, and the stair used by the muezzin, which is similarly attached. He began to consider other factors related to this case study, such as how to translate the intimacy of the Darriyah mosque to one that was much larger, what form the open spaces should take, and what structure and material would be most appropriate to Najdi precedent.

In its final form, the Qasr al Hukm complex is a masterful combination of old and new, large scale and small, distance and proximity. It has become an extremely successful and popular urban place, in addition to serving its administrative functions very well. Perhaps most importantly, it has returned the Mosque to its former role of being a connector between religious and commercial activity, as it was in the past, instead of being isolated in the middle of an asphalt parking lot, as it often is today, with no link to its civic surroundings.

## **Insensitive Translations**

Economic prosperity in the region for which Fathy and Badran have struggled to successfully find a tectonic identity, has meant that many others are now being invited to come there, from the west, to design buildings. They are unaware of the painstaking process that these pioneers have gone through to create this special architectural language and are often ignorant of its symbolism and significance. They often blindly copy the language that has been described here, with results that are at best inanimate, and at worst tragically misinformed and superficial. This is why awareness of what has been achieved by these leading architects from the culture itself is so important.

## CHAPTER TEN

# JAMES STEELE'S REFLECTIONS ON HASSAN FATHY, RASEM BADRAN AND ARAB “ARCHITECTURE OF IDENTITY”: A COMMENTARY

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Prof. Steele, who teaches at USC, who has taught in the Arab world, at King Faisal University in Dammam (Saudi Arabia) and who has, more importantly, edited the works of Hassan Fathy, is one of the best Western specialists who can enlighten us regarding the importance of Arab architecture. And he is perhaps the most competent one in the West.

In the paper delivered at this congress, *An Architecture of Identity: Hassan Fathy and Rasem Badran*, he has referred to a number of factors that, as he would probably say, contributed in one way or another to the emergence of an architecture of identity or architecture of resistance in the Arab world.

I was impressed by Prof. Steele's knowledgeable reference to works by Castells and by Peter Marcuse, two noteworthy and sharply analytical critics of Capitalist urbanism.

There exist, however, a few questions or doubts in my mind which may explain why I'm not quite happy with his main hypothesis that basically attempts to explain the emergence of what he calls an "architecture of resistance" as *a backlash phenomenon*. In other words, as a culturalist, regionalist or nationalist *reaction* to the effects of the presently on-going globalization. In addition, I must add, also as a reaction to the concomitant weakening of the nation-state, which he seems to see as an inevitable consequence brought about by globalization.

Generally speaking, I would acknowledge that broad *cultural* as well as more narrowly defined political backlash phenomena have come into

play, especially in the relationship between Western powers exerting an overwhelming force, and the populations of colonial and semi-colonial countries. It is enough to think of the nationalist movements, since the Sepoy rebellion, in India that culminated in that country when Gandhi was leading the struggle for independence. The May 4th movement in China is another case in point. Egyptian nationalism in the 1920s and 30s, Vietnamese and Indonesian quests for independence in the 1940s, and the struggle in Algeria in the 1950s and early 60s, are further examples, followed by a surge of independence movement in other areas of Africa. Of course, present conditions in the world give rise to resistance phenomena, as well.

*My first question* occasioned by Prof. Steele's thought-provoking article is this: If today's globalization process constitutes a fact that is relevant on the politico-economical as well as the cultural level, occasioning a backlash phenomenon, does that suffice to explain the 'new' and 'different' architectural approach Hassan Fathy proposed with increasing clarity since about 1937? Does it help us to see in what way that approach 'differed' from conventional or typical architectural approaches, both in Egypt and in the West?

*My second question* is this: May we assume that the assumption *that the present politico-economic process of so-called globalization weakens the nation-state* is generally valid? Can we depart from an 'automatic' connection between 'global' economic processes weakening nation-states and, by consequence, nationalist reactions everywhere - a hypothesis which would basically confirm Huntington's paradigm that suggests an existing or coming 'clash of civilizations'?

One could take issue with this and offer a different hypothesis, a less culturalist one, which is also less indebted to Huntington's concept of a 'clash of civilizations.' One could in fact say that the globalization process or, to put it differently, the present internationalization of capital has not invalidated the analysis according to which Capitalist processes are not neutral economic processes but politico-economic processes. The question is which social forces dominate them politically. And it could be argued that the hegemonic bloc in the U.S. is still dominant globally, that the intertwined bloc of (a) the large, U.S.-based trans-nationally operating corporations and their North American top executives, (b) the upper 2 or 5 or 10 percent of the U.S. population (in terms of wealth, especially major share ownership, ownership of commercial properties, and income), (c) the U.S. government and (d) the U.S. military are the dominant political, military, and economic force. And this is despite the present economic crisis and an overall slide of the relative weight of the U.S. within the

global economy. In other words, it is debatable whether we should not question any straightforward hypothesis of a weakening of the nation-state, in order to depart from the assumption that there is today one superpower (no matter how much it may be a waning power), that it exerts a neo-colonialist and neo-imperialist control over much of the globe, including much of the Arab world, that it relies on a certain partnership with otherwise (economically) competing sub-imperialist powers, that is to say, the European Union and Japan, and that the weakened nation-states are above all the minor states within the European Union and even more so, nation-states in the so-called Third World, under the neo-colonialist sway of the U.S.

This hypothesis would possibly put questions which we might ask with regard to Arab architecture into a different context.

I see it of course as an attempt to offer a progressive interpretation if Prof. Steele argues that Arab "architecture of identity" worthy of the name is an "architecture of resistance." And I take it for granted that Prof. Steele thinks of resistance against Western dominance, a Western architectural canon, in short: aspects of Western cultural imperialism.

If I am not quite happy with a culturalist interpretation, it is because both the Western onslaught and the resistance seem to occur, according to the 'culturalist' view, mainly in the minds of people, in debates, and in the aesthetic practice of architectural design, the way it is exercised on the drawing board or based on modern CAD techniques.

When the designs are realized (and, by the way, how they are realized, by what social forces, by which global or regional capitalist players, within which logic of the market, should not remain out of sight of any profound analysis), we of course see the visual forms and the appearances of buildings.

Then, it seems, we are supposed to recognize the presence and sense the effects of an "architecture of resistance", because, we must assume, "Arab architecture of resistance" or of identity will look rather different from Western architecture. Is it that easy? Do we understand the 'new' and 'different' architecture of Hassan Fathy, for instance, when we look at it in this way?

I have just touched on these points very briefly because I think others may want to say more decisive things regarding such on-going processes as the weakening of the nation-state or some nation-states, the internationalization of capital, U.S. hegemonism, the effects of cultural imperialism, and on the other hand, forms of political and cultural resistance in the so-called Third World.

I want to focus instead on Hassan Fathy. And in fact, I have three questions I want to ask with regard to Prof. Steele's paper, as far as Hassan Fathy is concerned.

### **Not 'Conversion' or a Sharp Turn – But Development**

The *first question* I would like to ask is whether it would not help to understand the development of Fathy if we try to situate it concretely and historically. I would like to ask whether that would help to overcome the assumption that, at some point, there was a sharp break, a sudden, clear, idealistic turn of that "young architect": a turn away from addiction to the Western canon and, instead, to what Prof. Steele calls an "architecture of identity."

If we embrace the idea that Fathy suddenly turned around and rejected a Western architectural formation obtained at the Polytechnic and a Western canon that was part of this formation, isn't that perhaps equivalent to short-circuiting a concrete development and missing its significance?

It can be shown, indeed, by turning both to Fathy's own testimony in this regard and to certain facts presented in *Architecture for the Poor* that a decisive development occurred in Fathy's case that took about 10 years, from 1927 (the year after he graduated) to 1937 when he designed his first adobe houses.

At least one person writing about Fathy has emphasized what he himself said: that encountering the squalid housing conditions of the peasants on one of his father's farms in 1927 left him deeply concerned and gave birth to his wish to build for (and, as he later said, with) the poor; a wish that grew more intense and had practical consequences.

The psychological shock then experienced (which may have produced a state of mind that had some qualities of a sharp 'turning point') was perhaps a necessary but not a sufficient cause of Fathy's growing maturity as an architect.

Nor was the confrontation with a circle of intellectuals and their nationalist sentiments that Prof. Steele mentioned.

I think we have to look at concrete, but less momentary circumstances that influenced Fathy in a deeper and broader way.

Which circumstances that must have had an influence on his perception and that drove his development, do I have in mind?

Three in all:

- (A) *The social or class relations in the countryside and what they meant in terms of the housing question of the peasants.*

I think that Fathy instinctively and pre-consciously or, more likely, with considerable clarity became aware of this. Probably not just at one moment, but increasingly so.

In a paper on Hassan Fathy, too extended to read now in full length<sup>1</sup>, I have tried to pinpoint the characteristics of this situation, as well as the ups and downs of the struggle for change, such as occupations of farms, agitation for land reform, and so on, because they form a background of Fathy's concern and later on, his activity as an architect desirous to build for the peasants, to build villages with them.

- **(B) *The dichotomy of the built environment in Cairo where he lived, mainly.***

A dichotomy historically produced, it was, as the newer 'European city' met with or rather, clashed with 'Old Cairo.' If Fathy reacted to European architecture, he could react, abstractly, to the contents imbibed at the Polytechnic; and he could react physically and intellectually, in a gradual process of growing awareness, to the built reality of the European city in Cairo. Exposure to the latter was much longer because he had always lived in Cairo. Emancipation from the idea *that it expressed modernity and development* instead of underdevelopment, *progress* rather than backwardness, *rationality* rather than confusion, *that it naturally offered its inhabitants higher social status* while the old parts of town condemned their inhabitants to the status of uneducated, lowly or socially declassed people must have come slowly. Leila El-Wakil mentioned the fact that Fathy got a job from the city to draw houses and a certain street of old, Fatimid Cairo in the context of an urban project. That work, diligently and thoughtfully undertaken, must have sharpened his eyes for the beauty of its houses. The recognition of the positive effect of the physical, material arrangement of houses and streets, of the specific urban fabric, in fact, on the well-being and social communication of the inhabitants must have come later.

-**(C) *The debate about 'national form' in the 1930s and its wider context.***

It has been pointed out by Prof. Steele that Fathy was in contact with a circle of nationalist intellectuals which included, at the time, the novelist Naguib Mahfouz. But does this observation suffice to understand what drove Fathy to break with uncritical adherence to the paradigm transmitted to him as a student of architecture? The fact of such contact has been

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<sup>1</sup> This paper (with many footnotes) on Hassan Fathy and on the reception he was accorded by a number of Arab architects and professors of architecture was also prompted by the essay presented by Prof. James Steele. It is too long, however, for inclusion in this book.

mentioned, I think, in order to pinpoint a source of the young Fathy's assumed conversion from a graduate of the Polytechnic, *enchanted with modern Western, prototypically Bauhaus architecture*, to an adherent of an architecture of identity that would express, it seems, 'nationalism.' Having once discovered 'nationalism' as an idea to be expressed in architecture, he could then try out several expressive ways: say, pharaonic lyrical forms. Or, later, Upper Egyptian Nubian forms. But the 'real' development' implicit in this would have occurred at once, suddenly, when Fathy embraced nationalism. All else was just a play or architectural experimentation with visual forms that were 'meant to express.'

As I indicated already, I question both the assumption of the sudden conversion (which would not amount to a real development) and the assumption that the mature Fathy's architecture, as against the young nationalist's architecture, remained also a play with forms that are above all meant to express an *idea*, that of nationalism, that of resistance.

***As to the influence of the debate going on in the circle that Prof. Steele indicated, I think we have also to broaden the underlying assumption that, well, there was this small group of people.***

***There was much more, I would say: there was a major current, underpinned by factors related to politics and economics.*** There was a debate about (as they called it) 'national form' going on in many so-called Third World countries at the time. It is well known where it was unleashed and what this debate reacted against. The origins of the debate were in Russia; the attack was against the 'international style'; the term 'national form' was thrown into the debate by the Russian leader; the debate had known repercussions among artists, writers, architects in China, Japan, Central and South America. It is also true that this debate, in China for instance, was preceded by a debate about so-called 'national character.' In Brazil, Mexico, Peru, Uruguay etc., the possibility of *indigenist* art and literature was debated. In the U.S., regionalism (and the satirical social realism of such artists as Ben Shahn, in the visual arts) flourished. It is not really conceivable that in Egypt, in the face of a semi-colonial situation, among all those who became conscious of ongoing debates about imperialism and who were hurt by the effects of the worldwide economic crisis triggered in 1929 (thus I'm speaking not only of some intellectuals, but of awake workers and peasant activists, as well), there should not have been critical repercussions that would turn people to a search for national form. (The term identity surfaced in relevant debates much later, probably not before the late 1960s.)

I ask therefore whether it is not necessary to situate Fathy's development *in his experience and reflection of*



- (a) the socio-economic situation in his country, especially the semi-feudal, semi-commercialized or market-driven agricultural class relationships existing during the 1930s,
- (b) the built environment, both in Cairo and in the countryside, and
- (c) the political and cultural debates at the time, especially those triggered by intellectuals close to or organized in progressive organizations.

But the factors that influenced Fathy's development are only part of the puzzle we must understand. The other part is his active role, the specific kind of active role he learned to practically unfold.

I would say that, as far as many aspects of Fathy's *development* are concerned, they reflect Fathy's reliance on *empirical research* and on *close contact with concrete people*, above all the peasants, the masons and workmen he worked with.

The *empirical research* centered on the built reality of old Cairene neighbourhoods, but also took note of the suburbs, the district towns in the delta and the peasants and workers' quarters in the countryside. And, not unimportantly, later on, it focused on the villages he went to see in 1941 for the first time in the backcountry of Upper Egypt, near Aswan. At a certain moment, it focused on Old Gournas, when he tried to understand what the Gournas as owners of New Gournas would need, want and like. What would be useful for them and, as they might see it, 'pleasing to the eye.'

Fathy developed not because of a sudden conversion, he developed the hard and difficult way, the real way, that is to say, through actual work, by learning empirically, by doing research, and by involving himself practically; theory and practice became closely intertwined and dependent on each other.

If we want to understand the effects of all this, and how it turned him from the young, idealistic, nationalist architect he was in the late 1920s or early 1930s to the mature architect, we must look at the results of his practice and his work.

The result of the work of the mature Fathy was not any more the idealistic production of lyrical designs, inspired by Pharaonic wall paintings. What Fathy's work reflected now was no longer an abstract nationalism abstractly encompassed. It is, however, important to see how, even as a mature architect, he learned step by step, also by trial and error, and certainly in concrete work contexts. Since about 1937, Fathy was much more firmly anchored in the social reality of Egypt than ever before.

## **A Different Understanding of Architecture Characterizing the Mature Fathy: Needs Took Precedence over Form**

*My second question* is this: is there a certain tendency apparent in the way the term "architecture of identity" is employed in Prof. Steele's article that is anchored in the prevalent thinking of most modern or post-modern architects and critics of architecture today? It seems to me that as a good professor of architectural studies, Prof. Steele takes architecture, including Fathy's "architecture of identity," as above all a matter of design or form. And this boils down to mere style or, above all, style. In other words, in talking about architecture (regardless of whether it is supposed to be an *architecture of identity* or not) one is talking about the imaginative visual idea an artist is supposed to start with and develop further. (Of course, when I say, a modern architect would understand architecture in that way, I'm referring to a contemporary architect who is working outside a "communal tradition," as Fathy would have called it.)

But isn't it true that Fathy (the 'mature' Fathy, that is) broke with such a way of focusing primarily on visual aesthetics, on design as an ingenious aesthetic accomplishment that is owed to a 'free' imagination? Isn't it true that in the course of Fathy's development, he reached a grasp of the matter where form ceased to be gratuitous, *inventive* in the individualistic sense – in other words: where it ceased to be *original*? Form indeed ceased to be the first consideration; the starting point of architectural work became the last and final result. Needs took precedence over form; needs of the people, in fact, the subaltern classes. Needs anchored in a specific socio-culture, in specific (also climatic) regional circumstances, and determined at the same time by the prevailing partly 'inherited' and partly colonially imposed politico-economic conditions, made it necessary to find counterstrategies. The needs of the poor (a majority of the population, in Egypt as elsewhere, certainly in Africa, Asia, 'Latin' America) required a strategy to be found by an architect determined to build affordable housing, they required a specific material which in turn required a construction technique which in turn required working in the vernacular building tradition which in turn meant and brought about a specific, 'vernacular' practice, anchored in the 'living tradition' of rural craftsmen: and all this resulted in form, a form that Fathy could carefully seek to nuance and modulate but that was determined by needs, material, technique and vernacular craftsmanship of the workers.

Starting with needs, deducing the necessary material, and deriving from both needs and material the visual form made Fathy a radically different architect, somebody whose thought and practice were concrete

and related concretely to existing social relationships. Whereas those who start with the notion and aim of expressing an idea, perhaps an idea of 'nation,' of 'Islamic values,' of 'Arab Culture,' are abstract rather than concrete; they remain imprisoned in the sphere of the mind, of ideas and ideologies, no matter how cleverly they may compete in the market for architectural services, no matter how successfully they may sell their product, and how renowned they may be. In the vulgar sense, such architects, and understandably they are the typical variety today, may be rather 'materialistically' concerned with prestige, awards, profit and expanding the business. In the vulgar sense, the mature Fathy may have been an idealist. In the non-colloquial sense inscribed in the terms *idealist* and *materialist*, it was Fathy, who was a materialist. He had little in common with Plato, let alone Berkeley; his thought and practice were closer to Ibn Rushd and Ibn Rushd's reception of Aristotle. It was Ibn Rushd who transmitted, embraced and preserved for us Aristotle's insight that the 'soul is the form of the body'; that soul, spirit and form do not exist separately of the body, that the dualism of form and material which justifies modern formalist architects to privilege form must be replaced by the monism which does not grant a separation of form and matter, form and material. For the mature Fathy, this was obvious: the form would come about simultaneously with the material realization; his material would take form. But focusing on the real world, Fathy was not myopic: his perception and his analysis did go further and deeper than seeing and choosing 'mud brick', the building material Fathy opted for. There was a deeper way of being anchored in the real, concrete world, rather than in abstractions, ideas, ideas centered on 'beautiful form' or 'national form.' His architecture was an expression of *use value*, of *needs*; he was aware of the material situation of the rural subaltern classes he wanted to build for; he took the material culture and the living tradition of the population seriously; he took the building material and the technique that corresponded to it seriously. And form, in his case, ceased to be something willful and whimsical, something that merely (or above all else) reflected the individualistic originality of an artist separated from all that which Fathy took seriously and which Fathy departed from in his endeavors.

### **In What Way Was Fathy Successful or Unsuccessful?**

There is still *a third question* I want to ask. We have heard that Prof. Steele who thinks highly of Fathy considered Fathy nonetheless, in the main, or in the last analysis, as "unsuccessful." In fact, Fathy has referred to himself as unsuccessful when, already in his eighties, he talked to Prof.

Youssef. At least, to my mind, such an assessment requires further consideration. What does "unsuccessful" mean, in the case of Fathy? I would claim that his success is obvious insofar as his approach points towards a future. It will be valued in the future once a better, freer, juster, more democratic and more humane political frame of reference exists. It will be valued because it points the way towards a future sustainable and ecological architecture that will be situated outside the market, free of the abstract rationality of modern Western (market-focused) technology, starting with the needs of the people - including their sense of beauty and their thirst for participatory involvement in the planning/designing/building process.

Fathy's "lack of success" is a *fact under present circumstances* exactly because he critiqued and resisted what these circumstances imply and usually force upon architects. He was slighted and marginalized and was denied more chances to build for, and with, the people because he developed a counter-model, a different approach: an architectural and social, social and architectural approach that resisted everything he deemed expressive of an *abstract rationality* that was in its effects destructive and anti-humane.

### **How Does Today's Arab Architecture, Situated in the Market, Relate to Fathy's Approach?**

I come now to *a fourth and last point*, not primarily about Fathy anymore but concerning modern Arab architecture today.

With regard to this existing Arab architecture, whether we dub it architecture of resistance or not, we can only assume that, depending on market conditions and on the relative 'originality' of the architect, it is more or less successful.

In other words, ignoring for a moment the *degree* of success, it is possible to say merely that it is successful.

And it is so (rather than "unsuccessful", like Fathy's) *to the extent that it has given up, in one way or other, the resistance* that constitutes Fathy's greatest achievement:

- *resistance against the way architects and developers and generally private enterprise in the construction sector ignore the (housing) needs of all those who cannot pay,*
- *resistance against the market that has proved unable to solve the housing question (at Fathy's time, by conservative estimates, at least 800 million people [and perhaps even 1 billion] out of a global*

population of between 2 and 3 billion [approximately 2.5 billion in 1950] were without any housing, or without all but the most wretched housing),

- *Resistance against the abstract rationality of modern Western technologies groomed to the market.*

Fathy, to repeat it, seeking to work for the people, the subaltern classes, the poor, opted out of the market.

He rejected standardization because it represents the logic of the market which only sees people as abstract people, constituting abstract quantifiable demand.

For Fathy, the concrete and specific needs of the poor, the masses, the common people, of each one of them, mattered.

He called the 'concrete and specific' – if it was collective – '**communal**,' and spoke of relevant architecture, anchored in collective, 'living' traditions, as 'communal art.'

He trusted in such customs of the common people as their self-help ability, the traditions of mutual help, of self-organization and of 'communal' autonomous practice.

When the concrete and specific needs were the needs of a person or a family, he called that quality 'individual' and he respected such 'individual needs'. He understood that **individuation** is about the possibility and potential of learning, of maturing, of unfolding one's suppressed humane potentialities. He knew that **individualism** is an ideology, a very modern, market-driven, competition-driven ideology that despises communal art and prefers what Fathy called 'whimsical originality.'

For young architects in the Arab world today, the constraints of the market are overwhelming. Beginning as employees in an architectural firm, they do routine jobs. Building tenement houses for the lower middle classes or hotels for the tourist industry, standardization invariable comes in. Such a market is a mass market, by and large, and that implies for this very reason a good deal of standardization and it implies elements of mass production.

The noted French filmmaker, Jean-Luc Godard, once put it like this: "the art of the masses is an idea of the Capitalists." They want to profit from economics of scale. Doesn't this sound relevant if we think of architecture for the masses today? The 'art' of the young architect supposed to design standardized housing for the anonymous masses degenerates, placed as it is, under the command of the cost-benefit analysis and of profit considerations.

It is true; however, that today, in the West as in the Arab world, the *better* architects seek a chance to escape from standardization, even though they can rarely do without industrially mass-produced materials like concrete, steel, and glass.

As soon as they are nationally or internationally renowned architects, a chance to produce 'fine architecture' that at least visually betrays no signs of standardization and mass-production exists for them. It exists when they serve the so-called "elites." The so-called "individualization" of the object they are asked to design takes place when architects and the construction industry are

- designing *representative* buildings for governments, corporations, and important institutions; or when they are
- focusing on the *upper* housing market segment.

This high-priced niche segment of the market functions largely in a way that requires architects to design not for the anonymous market, not for anonymous demand, but for a 'client' who has certain ideas as to 'what he wants.' (Except, of course, in extremely speculative property markets like Dubai where even the wealthy have accepted to buy or lease objects in the creation of which they had absolutely no say!)

Building mansions for the rich and the super-rich, architects may believe they experience an otherwise unknown freedom. Certainly it is a freedom from the customary cost-benefit analysis, and from the limiting constraints of extreme standardization. But is it also freedom from the compulsion to be 'innovative'? To create 'something totally different'? To 'outdo everybody else in the community of architects'? How alienating is this constant, unrealistic expectation to be forever innovative, forever offering something visually different, forever producing a new and still more impressive aura, an even more thrilling commodity?

The same may be said when renowned architects are asked to build luxury hotels, or spectacular office towers for major corporations.

It is difficult to see how a competitive, market-driven compulsion to produce the 'extraordinary,' in terms of architectural style or form, *and this in order to reflect the 'extraordinary' prestige and status of the client* (for instance his economic strength as a 'player in the market' or the might and arrogance of political rulers), might result in an 'architecture of resistance.'

There are of course those commissions obtained by renowned architects, which entail projects that pretend to reflect the common good and to benefit the public at large.

Take for instance the example of a commission to design a university library, a commission that grants and perhaps encourages seeking 'expression of an Arab identity.'

But, as Fathy noted, if we resist standardization and mass production, we should recognize that the modern Western model of production and consumption has also produced mass education. Mass education is mass production of a so-called intelligentsia, of 'technicians', but also of 'clerks' referred to as 'experts' and 'specialists' that will fulfill bureaucratic and other functions essential in the context of said model.

Isn't it contradictory, we might ask, that the Western model is capable of institutionalizing mass education while at the same time it undermines and subverts the knowledge, the experience and the willingness to go on learning, in the masses? It stultifies the masses by mass communication, mass media and mass education but it exults in building expensive libraries, using perhaps costly materials, for this most cherished institution of higher mass education, the university. Which, doubtlessly, in its present form, is a modern, Western institution. And an institution, at that, which reflects very unequal per capita spending on education, depending on whether you are one of those cherished few who go on to obtain a Ph.D., or whether you merely obtain a primary school education in the countryside. Therefore, the question may be allowed whether, in education, 'small' might not be 'beautiful,' just as it might be 'beautiful' in the production sector and distribution sector (and more sustainable, and more just, on top of it), and whether culture would not advance more if we would see it flourish everywhere in small 'universities' in every neighborhood in the towns, and also in every village.

As for today's university libraries, in the Arab world as well, and including those attempting to project an Arab identity, by their forms, their style, their colour, it is not surprising that such buildings (buildings of institutions that, each year, produce thousands of B.A.s and B.Sc.s. and M.A.s and M.Sc.s.) should lack what Fathy called 'human scale.'

It cannot surprise us that being part and parcel of an institution of mass education, and meant to accommodate large numbers of students and faculty members, they must be 'large urban forms' – ready not only to take up large numbers but also to impress by their size, in addition to impressing by their shape and their material. If, however, they must dwarf the individual, what or whom do they resist? Maybe the public at large, those who enter, those who walk past them, and most of all, those who (failing to be academics) are kept out?

CHAPTER ELEVEN

CONTEMPORARY ARABIC LITERATURE  
AND WORLD LITERATURE:  
A METHODOLOGICAL PROPOSITION

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*In memoriam*  
*Pierre Bourdieu (1930-2002)*

Whereas the acculturation and culture contact theories<sup>1</sup>, which are so ‘popular’ in academic circles today, attempt to trace the mechanisms of the infiltration of an emitted cultural element (or of more than one) into another culture and society, mostly starting from a Western model as received in Non-Western, previously colonised countries, my theoretical proposition is to start from the receiving socio-cultural context instead. However, I do not propose to reverse the hitherto prevailing hierarchy of cultural ‘maturity’ of the emitted cultural elements vs. ‘less mature’ receiving socio-cultures as suggested in said theories. This hierarchy might be best illustrated by the fact that Western literatures, or those written in Western languages, were considered identical to World literature during at least the last two centuries.

On the contrary, according to the theoretical model suggested by me, we should regard the transmitted cultural element as being equal to the receiving socio-cultural context in which it is often remoulded according to the different living conditions, value systems and practices of the

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<sup>1</sup> See the influential works of the main founders of these theories: Herskovits, M.J.: *Acculturation: The Study of Culture Contacts*, New York 1938; Malinowski, Bronislaw: *A Scientific Theory of Culture and Other Essays*, Chapel Hill, NC (The University of North Carolina Press) 1944.



receiving culture in a specific phase of its history. However, when this remoulding process takes place in a way which is less aware of the objective difference between the received model and the relative specificity of the receiving context, I suggest to call it “socio-cultural interference”<sup>2</sup> by drawing on the concept of interference in linguistics. This concept is borrowed again from physics and biology. While using it to designate socio-cultural interference(s), I intend to describe and follow up the less conscious mechanisms related to the process of receiving an alien cultural element or model. This might remind us of the approach of imagology in Comparative Literature<sup>3</sup> or to some extent even, of the ‘horizon of expectation’ (Erwartungshorizont) of Hans Robert Jauss. However, my model is different as it suggests tracing the mechanisms and forms of socio-cultural interferences at work on the receiving side, in order to establish an objective picture of the structural difference between the receiving and the transmitting socio-cultures. Once this contrastive ‘map’ (with its different subjective self-images and hetero-images) is set up and becomes familiar to the receivers of the transmitted cultural model, the objective prerequisites for a more sane and productive interaction between both cultures – the receiving and the received one – are, I would say, indeed given.<sup>4</sup> This is a general postulation which is of an epistemological nature. And I argue that it would be as valid with regard to immaterial as well as material cultural exchange, as has been shown, for instance, in the case of Pharmacology.<sup>5</sup>

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<sup>2</sup> See my essay: Preliminary Reflections on the Congress Theme: The Socio-Cultural Interaction Processes Between the Arab World and the West in Modern Times, in: *Intercultural Studies, Yearbook of the International Association of Intercultural Studies (IAIS)*, Bochum 1983, pp.11-47 – [Def.: Socio-Cultural]

<sup>3</sup> Cf. Fischer, Manfred S.: *Nationale Images als Gegenstand vergleichender Literaturgeschichte. Untersuchungen zur Entstehung der komparatistischen Imagologie*. Bonn 1981 (253pp.)

<sup>4</sup> See, with regard to this approach, my books (among other publications): *Min al-Tadakhul ila al-Tafa’ul al-Hadari*, Cairo 2001 (391pp.); *Al-Tadakhul al-Hadari wa’l-Istiqlal al-Fikri*, Cairo 1993 (199pp.)

<sup>5</sup> Even though this might look far-fetched, at a cursory glance, consideration of pharmacological research in its intercultural context has added a significant dimension to my contrastive socio-cultural model, namely that of “praxis”. Almost parallel, though independently from my first writings outlining my intercultural, interactive model (1983), Mohamed Raouf Hamid at the time lecturer of pharmacology at al-Fatih University in Libya (see his invaluable contribution to this volume), found out, along with his research team of undergraduate students that the regular consumption of hot pepper (capsicum) with each meal (a culinary

If I am to apply this general approach to Arabic vs. World Literature from the perspective of Comparative and General Literature, divergences will not only emerge with regard to René Wellek's ahistorical *Theory of Literature*<sup>6</sup>, but also regarding the good will if not militant endeavours of the recently deceased René Étiemble, to “decolonise” and thus emancipate the concept of World Literature from its sheer *Eurocentricité* in modern times.<sup>7</sup>

Needless to say that Étiemble's heroic stance, not only in criticizing the new provinciality of a Western club asserting their canon of “world literary standards” but also in trying to widen their limited scope by stressing the importance of the cultural contribution of non-Western literatures in the framework of the *Encyclopaedia Universalis* (for which he was responsible with respect to the section on World Literatures), deserves our deep appreciation. However, his grand endeavours were marred by his purely philological approach drawing on Mallarmé's tenet: *la littérature n'est que des mots*. In this, he did not differ much from René Wellek's ahistorical maxim: literature is one and all (even though Wellek's “one and all” is confined to Western literatures or those written in Western languages); the approach is unfortunately the same.

Libyan custom), affects the absorption of medicine. They found out as well that, contrary to the internationally prevailing pharmacological assumptions at the time, this regular hot pepper consumption lessens the likelihood of contracting peptic ulcers. This discovery, springing from an experimental approach based on a presumed validity of socio-cultural specificities, has led to a considerable modification in general medical theories and pharmacological practice on a worldwide scale. It is noteworthy that said discovery - which was receiving due recognition during international pharmacological conferences from Japan (1981) to Austria (1982) and Switzerland (1983) and was subsequently drawn on by the pharmaceutical industry in many parts of the world - was originally accomplished by Libyan undergraduate students along with their supervisor, Professor M.R. Hamed, based on their sovereign questioning of Western norms, by taking into consideration their specific socio-cultural difference and treating it on an equal footing with those experiences from which the previously internationalised norms had sprung. - Cf. Hamed, M.R. / El Zarouk, K. / ElMakhzouni, A. / El-Bishty, W. / Metwally, S.A. / Gundi, M.B. / El-Naas, F.: The Influence of Capcaicin on Drug Transport Across Biological Membranes, Abstract No. 141, p. 213, Fédération Internationale de Pharmacologie (FIP) abstracts, The 43rd International Congress of Pharmaceutical Sciences, Montreux, 5-9 September 1983.

<sup>6</sup> Formulated together with Austin Warren, and published in 1949.

<sup>7</sup> See for instance, his book: *Essais de littérature (vraiment) générale*, Paris 1974; as well as his opus: *Quelques essais de littérature universelle*, Paris 1982, that he dedicated to Moenes Taha Hussein, the son of Taha Hussein (Amid al-Adab al-Arabi).

Unlike Wellek who subscribed to exactly the Neo-Kantian *a priori*es, asserted by Carl Friedrich Krause and his school, that were to underpin the main cosmopolitan tenets propagated by Ortega y Gasset in Spain during the early decades of the last century, I suggest an alternative approach based on what I call the relative socio-cultural specificities. To define what I understand by socio-cultural specificity (I suggest, here, to introduce the English term specificity, a neologism designed to connote the abstract quality of the French category *spécificité*), I refer to Mohamed Dowidar, especially a passage in his book *L'économie politique: une science sociale*<sup>8</sup>, which I would like to quote extensively: “En ce qui concerne les faits sociaux, le processus social se présente dans l'ensemble des activités des individus et des groupes dans leurs répétitions perpétuelles dans les circonstances données des développements historiques d'une société donnée. Ses activités se répètent d'une manière particulière devenant ainsi une caractéristique de l'étape de développement de la société en question. Cette manière particulière de la répétition des activités sociales leurs donnent une sorte de régularité. Grâce à cette régularité, on peut distinguer des relations qui se répètent sans cesse entre les différentes activités. Ce qui dessine pour chaque société, et même pour chacune des phases historiques du développement d'une seule société, ses lois objectives de fonctionnement et de développement. Et même quand il s'agit des sociétés différentes connaissant des lois objectives communes (comme celle de la circulation monétaire, par exemple), le mode de fonctionnement de ces lois peut être différente d'une société à l'autre, une différence qui émane des conditions spécifiques à chaque société : dans le cadre de l'histoire de la société humaine, chaque société a sa propre spécificité historique.”

I am well aware, of course, of the similarities among the various social cultures that assert themselves, especially today, and that are also revealed by empirical comparative research (though this must not make us oblivious of the differences between them, in terms of systems of values and visions of the world).<sup>9</sup>

That is why I am critical of the all too harmonising theories trying to stress *the common* in human literatures and cultures by subtly or overtly equating it with the hegemonic Western standards. Mustafa Badawi marginalizes, for instance, the role of the still living legacy (turath)<sup>10</sup> – not

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<sup>8</sup> Paris 1973.

<sup>9</sup> Cf. Leenhardt, Jacques / Josza, Pierre: Lire la lecture. Essai de sociologie de la lecture, Paris 1982

<sup>10</sup> See, contrary to this approach: Ayad, Shukri: Al-Qissa al-Qasira fi Misr: Dirasa fi Ta'sil Naw' Adabi, Cairo 1997; see also my critical review of Philip C. Sadgrove's Eurocentric approach in his book The Egyptian Theatre in the

only its learned discourses, but also its folk variations – and focuses instead on Western influences and models. (See his work: *A Short History of Modern Arabic Literature*, Oxford 1993, as well as his articles, among which I want to point out as representative: *The Father of the Modern Egyptian Theatre: Ya`qub Sannu`*, in: *Journal of Arabic Literature*, Vol. XVI, 1985, pp.132-145). Similarly, Pierre Cachia, after a discussion of the various forms and ‘shades’ of explicit and implicit religiosity in modern Arabic literature, describes Mahfouz's mysticism as ‘questing’, even though the questing attitude is a trait of the mystics. Amalgamating it with Western renaissance ideals, he comes to the following conclusion: “Egypt’s modernists – like those of many other climes – [note this insertion! (M.Y.)] have Man very much at the centre of the universe.” (See his book: *An Overview of Modern Arabic Literature*, Edinburgh 1990, p. 150.) In the case of Mustafa Badawi, the motivation behind his attempt to minimise if not suppress the role of various ‘shades’ or types of religiosity in the imaginative realms of contemporary Arab writers could be taken to reflect a kind of socio-political defence mechanism against the frequently discriminatory tendency in the West to stigmatise Arabs as “fundamentalists”. In fact, it is necessary to reveal to what extent international financial capital has, in its present predicament (while making use of scientific and technological achievements), a vested interest in veiling the mechanisms of its own conflict of interest with ordinary direct producers worldwide, thus replacing the perception of this conflict by a purposely alleged ‘war of religions’, even though it does not have any religious beliefs itself, except in the form of a dedication to its enormous profits. Therefore, we see it today directing its war efforts against the Arab as well as the entire Islamic region, while trying at the same time to ‘integrate’ it into its globalising commodity geared hegemonic world order. (See, for instance, its policies as represented by the statutes of the World Bank, the International Monetary Fund, and the World Trade Organisation.) By this, it resists scientific rationality according to which its hegemonic claims are not justified.

It is noticeable, though, that the religious traits in recent Arab literary productions were amply discussed in the context of the cultural activities of the Cairo International Book Fair, held in January 2002. This, however, has nothing to do with the image propagated in the Western media under the heading of so-called “religious fundamentalism”, as even an author like Nagib Mahfouz who figured prominently in this context, is deeply

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Nineteenth Century, 1799-1882, Berkeley (Ithaca Press) 1996, in: *Theatre Research International* [Oxford University Press], Vol. 24, No. 2, Summer 1999, pp.215-6.

imbued with a religious vision of the world, perhaps a certain ‘questing’ one, as Cachia chooses to call it, or an agnostic mysticism, as I would put it.

In contemporary Arabic literature, one encounters a wide range of religiosity, ranging from piety to open denial of religious values. However, the majority can be located in the middle spectrum of the scale. Wasatiyya (moderation) is regarded to be a main characteristic in the Islamic religious realms of Arab writers today. As it were, Arab intellectuals living in the West as well as Western Arabists, who would easily be influenced by them, such as Cachia, often take the shortest route by suggesting that it is most of all a prevalence of modern ‘Western universal values’ that can be noticed in contemporary literary production today. This aprioristic view is, however, asserted without ever researching the objective differences extant, which would show a wide spread of attitudes and world views, reaching from Al-Aqqad’s or Abdel-Tawwab Youssef’s religiosity to Sun’alla Ibrahim’s scientifically oriented literary realm. However, I would maintain, and so would Mahfouz probably see it, that what is at stake here is a kind of ‘surpassing’ [‘Aufhebung’, in the Hegelian sense] of the religious system of values, which is thus being ‘lifted up’ to a higher, more rational level. This is an approach that is altogether different from the fabricated dichotomy between the image of modern Western societies, vested with science and technology, and that of the traditional ones, allegedly overwhelmed by ‘fanatic fundamentalism’. This much publicised dichotomy would in fact be a suitable subject for imagological research. Meanwhile, a sound scientific attitude towards reality does not necessarily preclude the existence of a variety of cultural approaches, among them, the contemporary Arab one. Nothing could be more impoverishing for humanity, I guess, than a uniformity of its cultural inventions. This levelling uniformity is de facto, however, a necessary effect of the propagated commodified values of the world market, the various national and international institutions and organisations, their system of ‘reward’ and ‘punishment’ (meted out according to alleged ‘human rights’ categories), and their corresponding ideology that is succinctly summed up in the following tenet: *Man is Man everywhere and at every moment in history*. According to this ideology, texts can ‘travel’ indiscriminately from one place to another, and from one era to another as well, by means of the vehicle of translation, and this basically without saying anything significantly different (or else, it is claimed, they would not even be translatable!).

This leads us to a methodological discussion of the issue of the circulating myth of an unchangeable universality of literary production

and reception: If we are to assume that each literary text endeavours to communicate a certain wish or concern via its imaginative realm in a given society, we have to admit that, once emitted, the text undergoes modifications, changes and additions on behalf of the recipient(s) confronting it in one and the same language and country. But how would the text and its reception be affected if it were to travel to other languages and countries? This displacement, if we are to borrow the term from psychoanalysis, might best be illustrated through an extreme lack of ‘proper’ communication as illustrated in the following dialogue between a ‘normal’ person and a ‘schizophrenic’:

“Hey, Conrad, I am Hans. Shouldn’t we go out for a walk together?”

“Ah, Maria, too many people in the sky. Where are my reading shoes? [Then he stops talking for 30 min., after which he resumes:] Tea blue knee like red sea.”

This involvement of the ‘schizophrenic’ in his own world of fantasies illustrates, even though in an extreme way (for the sake of clarity), what literature undergoes in its reception processes. The specific socio-cultural context (in which the recipient is embedded) alters, at times even significantly, the originally emitted literary message. This is, even more so, the case with translations in the socio-cultural sense of the word. As an example, let me refer to the performance of Alfred Farag’s play, *Ali Ganah At-Tabrizi wa Tabi`uh Quffah*, performed by the Maybach company for almost a year between 1985 and 1986 in Germany (FRG), Austria, and several German-speaking Swiss cantons under the title *At-Tabrizi und sein Knecht*. The play was a huge success as it provoked laughter on the part of the German-speaking public while presenting one of its main scenes in which the actors appear to be eating the air as if it was a delicious meal.

The play borrowed in fact from three stories of the Arabian Nights, and the scene that was giving rise to laughter in a ‘German’ context showed a cobbler named Quffa who hoped to have a lovely meal for free at the house of His Excellency, Prince Ali Ganah at-Tabrizi. He becomes instead an assistant and valet to the bankrupt prince. Both of them set out on a long journey around the world. When they arrive at a kingdom somewhere, they pretend to be rich merchants awaiting their caravan of luxurious goods in that town. Ali, the exotic prince, soon distributes the whole savings of Quffa among the people of the town. From there on, all the wealthy or at least modestly affluent merchants in town attempt to get in touch with him. The king even offers his daughter as a bride, thus to get hold of the wealth of the caravan. Ali and Quffa, therefore, live in abundance at the king’s palace. However, the caravan never arrives. And

on top of it, the king's wealth soon has vanished as well, as Ali has distributed it among the ordinary folk and the poor. A kind of oriental Robin Hood! Reluctantly, the previously rich to whom Ali is now indebted, decide to hang him, after having given up their hope of ever seeing his caravan. As Ali is led to the gallows, a stranger with a glamorous turban arrives to announce the arrival of the long-awaited caravan. It is none other than Quffa himself, who has disguised himself as a wealthy stranger. And thus Ali is freed and while pretending to make a quick dash in order to be the first to receive his caravan, he takes flight with Quffa, joined by the princess, who is glad to accompany them.

Now, the context in which Farag wrote this play, in 1968, was that of the aftermath of the Arab-Israeli war of June, 1967. His play was a disguised critique in a *slave language*, as Brecht would say, of the failure of the Arab regimes to fulfill what they kept promising all the time: namely to liberate the Arabs of Palestine from the Israeli colonisation they are suffering from since 1948.

The most exciting scene in the play, that of Quffa eating the air at Ali's house, symbolized a self-deception implied in his way of giving credence to the empty promises of Ali, and at the same time a tendency to imagine that one's dreams had been fulfilled. This is the production and reception context of the play in Egypt and the rest of the Arab world, in the aftermath of the Arab-Israeli war of June 1967, whereas its reception context in the FRG, Austria, and Switzerland, during the mid-80s of the last century is quite different. The audience's exhilaration, in response to the scene of Quffa devouring the air, was one of airing a repressed feeling of 'living', or 'being truly alive', otherwise suppressed in a formally rationalistic society, as Max Weber might have put it,<sup>11</sup> or a society reigned by instrumental reason, as Horkheimer would have maintained.<sup>12</sup> Derrida might add to this the virtuality of their sense of being alive.

It is clear that we are not dealing here with the case of a society dreaming of abundance, as a certain degree of welfare has been achieved in all three German speaking countries in which Farag's play was performed.<sup>13</sup>

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<sup>11</sup> See: 'Formaler Rationalismus', in his main opus, *Wirtschaft und Gesellschaft*, Koeln / Berlin 1964, Vol. 1, p. 65. - What is meant here is that it is necessary to oppose real (non-artificial and non-virtual) rationality to that kind of formal rationalism that dominates most so-called modern Western societies today. (Cf. *Materialer vs. formaler Rationalismus*, in: Weber, Max, *ibid.*)

<sup>12</sup> In his: *Kritik der instrumentellen Vernunft*, 1947.

<sup>13</sup> This dream of abundance seems to have constituted another, additional connotation of the scene in question and of the entire play in the Near East context.

From the point of view of the native Germans or Swiss citizens of the mid-80s, therefore, devouring the air might also be taken to embody a critique of the promises of the “consumer society” as propagated by greedy business people, bankers and politicians, while the needs of many ordinary people in their own countries are not satisfied and those in the Third World are starving – a reproach comparable to the one formulated by the students protesting against their societies in 1968 in Germany and France. Their protest against a consumption oriented society during the relative economic boom of the late 60s in Central Europe is altogether different, however, from the students’ revolt of the same era in various Arab countries like Egypt and Morocco, directed against a society of deprivation.

This example illustrates, I hope, the fallacy of the claim of so-called literary invariables in all world cultures, as maintained by such a leading comparatist as René Étiemble (in his famous book: *Essais de littérature (vraiment) générale*, *ibid.*), or of the strange claim made by Edward Said, when he argues for instance in his book *Culture and Imperialism* that Beethoven belongs to the Africans as much, as seemingly, he does to the Germans.<sup>14</sup> Such sweeping statements, despite their naively noble intentions, sever the literary and artistic works from their concrete production and reception conditions and thus mystify them.

This very point leads us to the second issue of this intervention, namely, the question dealing with the Canonization of literature in Arabic as well as World Literature.

Needless to say, we are still encountering that dominating fiction on a worldwide scale, as already stated at the outset of this chapter, which identifies World Literature with European literatures, or at least literatures written in European languages. This often rather subtle understanding has been clearly voiced by Horst Rüdiger, the late German professor of Comparative Literature, in an oft-quoted statement of his:

“World literature is not a General Assembly of the UN where the vote of a previous colony, that has been recently given its independence, being itself void of any intellectual or economic resources, would be equal to that of a Superpower, or of a population looking back on a cultural legacy encompassing thousands of years [sic!].”<sup>15</sup>

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<sup>14</sup> Introduction, p.XXVIII.

<sup>15</sup> “Weltliteratur ist keine Vollversammlung der Vereinigten Nationen, in der die Stimme einer soeben in die Selbstständigkeit entlassenen fruheren Kolonie, ohne jegliche wirtschaftlichen und geistigen Ressourcen, mit derjenigen einer Grossmacht oder eines Volkes, das auf eine mehrtausendjaehrige Kultur zurueckblicken kann, gleichzusetzen ist.” This revealing passage is included in:



However, it is not only by way of such Eurocentric statements that we are to demonstrate the irrationality of the dominating canon. In an even more subtle way, it is reflected by the *ahistorical* literary standards implied in the lists of ‘important writers’. Such a list usually starts with Sophocles, Euripides, leading via Dante and Goethe to Rimbaud, Baudelaire, Balzac, Zola, and Brecht, thus to name only a few. It is true that the late René Étiemble added to this list the eminent writers of Africa and Asia who were for a long time excluded from World Literature as they did not write (nor were they published!) in any European language. Or else they were not sufficiently translated into any of these supposedly decisive languages. However, the canon, even though widened now to encompass all the literatures of the world or most of them, is still arbitrary (in the pejorative sense of the word) as long as it abstracts literature from its specific production and reception contexts. This easily leads to a mystification of the literary phenomenon, whereas the recognition of its specific conditions of production and reception (and of its direct or indirect position with regard to either the dominating or dominated aesthetic ideologies) demystifies clearly enough the quality of its contribution and thus helps elucidate the reasons for having recourse to it and receiving it in a variety of different socio-cultural contexts. This is not only valid with regard to politically – and socially – committed literary works; it is also true in the case of apparently apolitical literary productions seen to be void of any social dimension as they ostensibly deal with the satisfaction of specific human needs in a given socio-economic and cultural context, be it by ‘entertaining’ or by ‘distracting’ (see, for instance, Bakhtin’s studies on the phenomenon of carnival).

### **The Nobel Prize in Literature and international recognition**

It is by now a well-known fact that non-European literatures get access to readers (and viewers!) the world over once awarded such a prize as the Nobel Prize. However, the committee awarding this prize is not merely influenced by literary considerations in its choices. This has been clearly

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Horst Rüdiger, *Europäische Literatur – Weltliteratur. Goethes Konzeption und die Forderungen unserer Epoche*, in: Rinner, F. / Zerinschek, K.: *Komparatistik. Theoretische Ueberlegungen und Wechselseitigkeit*. Heidelberg 1981, p. 39. Indeed because of the clarity of this racist statement, Rüdiger became ‘famous’, as it is often quoted to unveil what other, more subtle racists try to disguise in their discourses!

documented in a book commissioned by said committee and entitled: *The Nobel Prize in Literature – A Study of the Criteria behind the Choices*, by Kjell Espmark, first published in English in 1991 by G.K. Hall & Co., Boston, Massachusetts, USA. Its copyright is in fact held by its author since 1986, as it was first published during the same year in Swedish as part of a series celebrating the bicentennial of the Swedish Academy. It is quite clear, however, that the English version of this book, on which the author worked together with an English native speaker, contains substantial additions regarding the Nobel laureates in literature awarded the prize after 1986, among them Naguib Mahfouz (laureate in 1988) who is mentioned on several occasions in the English version of this book.

In 1982, I delivered a paper entitled: *Literary and Social Transformations: The Case of Modern European and Arab Literatures*, at the Tenth Triennial Congress of the International Comparative Literature Association (ICLA), held at the time at New York University. My paper, which was published at the very end of the first chapter of the proceedings of said congress by Garland Publishers (New York, N.Y.), was critical of the mystic idealism in the generational novels of both Thomas Mann's *Buddenbrooks* and Naguib Mahfouz's Trilogy. I concluded, with regard to what I called the dichotomy of human life in Mahfouz's literary realm, that in the centre of this very realm we find the individual in quest of his salvation – but on his own, instead of looking for the appropriate consciousness and organization of the class he adheres to. He stays in this situation torn between his prosaic instincts and metaphysical aspirations; the first pull him to the Earth and the second to Heaven. Human life appears thereafter reduced to the biological processes and wasted on metaphysics. The individual differences are just the result of the differences in the portion of eternal characteristics a human being is blessed with or not. Therefore, justice in this utopia of Nagib Mahfouz is nothing but the possibility to realize these eternal values with regard to a dichotomy of people classified as good and evil.

Indeed, this very idealistic value system determines the apparently very realistic, but in fact highly naturalistic, narrative technique in Naguib Mahfouz' trilogy...<sup>16</sup>

Now let us compare this critical assessment which happened to stand alone in the whole literature on Mahfouz that had been published in European languages so far (until 1985), with the criteria of the committee awarding the Nobel Prize in literature as revealed in the book published by its member, Kjell Espmark, and commissioned by the committee.

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<sup>16</sup> p. 56 of the proceedings of said ICLA congress.

We read the following in the first chapter, entitled *A Lofty and Sound Idealism* (p. 9):

“The Nobel Prize in literature was not primarily a literary prize; the literary prize of a work is weighed against its contribution to humanity’s struggle ‘towards an ideal’ [put in inverted commas in the original]. The main tenet regarding the criteria underlying the choices involved in awarding said prize stresses (on p. 9 of said book) an [...] emphasis on ‘idealism of conception’ and of ‘idealism of life’ [the inverted commas are again in the original; M.Y.]”

Now, I will end my intervention with these two quotations, the first published in 1985 in which I presented my criticism of the mystic idealism of Nagib Mahfouz and Thomas Mann, and the second published a year later (1986) in which the author (Kjell Espmark) asserts the special concern of the Nobel prize committee about supporting this very conservative idealism. There is another question looking for an answer: why did the committee decide at last to choose Mahfouz instead of Adonis, even though the latter was warmly supported by some members from the very outset of the deliberations of the committee, as stated in the English version of the book?<sup>17</sup> Even though the author stated that the committee opted at last for the epic form, the reasons for this decision may well remain partially in the dark. We do not learn for instance whether the committee got hold, in the course of its successive sessions, of the only criticism of Mahfouz’s literary realm published so far in any European language.<sup>18</sup> And if so, was this critical account (although not intended to have this effect) rather ‘useful’ to the committee, as it presented a parallel criticism of Mahfouz and Thomas Mann’s *Buddenbrooks*, a work for which that author had been awarded the same prize in 1929? Whether or not it did or did not have this effect (which is not the real issue here), there is one thing we can be assured of, namely, that the choice of the committee with regard to Naguib Mahfouz did not contradict the criteria which constitute the social policy underlying the prize (as officially stated in the book commissioned by the committee). As it is a well-known fact that once an author is awarded this prize, his work gets translated into most of the widely spoken languages (symptomatically called *Weltsprachen*, universal languages, in German), this means a worldwide propagation of a certain aesthetic ideology. While the committee has been complying with the Nobel Prize criteria, in the case of Mahfouz, the widespread publication that this entails, helps in turn to reproduce the dominating

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<sup>17</sup> Cf. Skjell Espmark, *ibid*, p.143.

<sup>18</sup> This contribution was also referring to Ibrahim Fathi’s essay, *Al-‘Alam ar-Rawai’ inda Nagib Mahfouz (Mahfouz’s Literary Realm)*, Cairo, n.d.

social relations on a worldwide level by indoctrinating an ideology of mystic idealism which obscures reality, thereby neutralizing any materialization of a real emancipation of mankind from the reigning World Market mechanisms.

Unlike the Global Village ideology of the World Market, my methodological proposition is one of working out the objective differences between the various social cultures worldwide on the basis of real equality and openness towards each other. As they are objectively equal to each other while differing with regard to production and reception processes, and especially with respect to their specific reception contexts, this anti-hierarchical approach would not only help curb the levelling and unifying effect of World Market mechanisms, but also enhance today's intercultural relations by supporting a new trend of positive cultural and literary exchange on a worldwide scale. In the context of such a demystified and unprejudiced cultural exchange, contemporary Arabic literature would be (happily) inserted among the endless varieties of socio-cultural literary inventions of mankind. In order to make this possible, our world is in need of other international literary prizes and of another UNESCO: of a cultural institution of really democratically united Social Cultures worldwide that would be interacting on the basis of an equal enhancement of each of their indigenous contributions to World Literature and culture. Such an institution (or such institutions) should be organized and subsidized by the ordinary populations of the various social cultures the world over and run by their democratically elected representatives. I know it is a dream, as it jumps over so many existing obstacles in the reality of our world today, which is reigned by hegemonic interests and by mechanisms of the World Market. And yet, how many dreams of the past became reality today, except for one dream so far, which is that of rendering humanity genuinely humane and rational.<sup>19</sup>

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<sup>19</sup> I am well aware of the utopian character of this claim, as the present world economy tends towards a containment of the production process in the opposite direction, namely a further alienation of direct producers from their concrete and specific socio-cultural contexts, through a dismemberment of the production of commodities for the World Market, so that in each of the countries a part of the product gets manufactured and then the whole is assembled in a different country. However, what constitutes the real crisis of the world today is that, through the computerisation of the production process, most of the direct producers become not only redundant in the labour market, but also, once and for all, (totally) excluded from the production process. What ensues is that, given the progressive shortening of their social security schemes in the Western countries themselves, they become more and more unable to purchase the commodities offered by the market. In this lies the core of the present economic crisis on a worldwide level, a

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dilemma from which the financial capital, especially in the USA, tries to find an escape route by focusing on the militarization of the world, and the creation and support of conflicts worldwide, especially by means of replacing the real social relations through ideological and religious allegations, as represented in the theory of a Clash of Civilizations. All of this leads to an ever-increasing demand for arms on the World Market, and thus, to a monumental enhancement of this sector of production and a sophistication of its destructive techniques.

In this respect, Mohamed Dowidar is right when he maintains that at present, world financial capital is trying to impose its hegemonic domination over the globe by having recourse to scientific and technological achievements while hunting after religious clashes, even though said capital has no real regard for any religious values that are the product of human wisdom throughout the course of history. The supposed (and in fact instigated) religious conflicts are veiling the real conflict, which is a conflict between the ordinary direct producers and those who are pursuing the maximization of profits on the World Market; whereas scientific rationality goes against a perpetuation of a further hegemony of financial capital over the world's populations.

Needless to say that without accounting for this background, a precise recognition of the factors behind the mechanisms of marginalisation of so-called Third World literatures and cultures, including contemporary Arabic literature, won't be lucid enough, especially in view of their precarious relation to the – so far – Western oriented 'World literary canon'. (See in this regard my essay: Towards a Real Decentralization of the Literary Canon: The Arab Contribution, in: Horwath, Peter et al. (eds.), *Humanism and the Good Life*, Proceedings of the Fifteenth Congress of the World Federation of Humanists, New York (Peter Lang) 1998, p.381-9; see also my relatively recently published essay: *Decolonizing World Literature*, in: D'haen, Theo et al (eds.): *Major versus Minor ? Languages and Literatures in a Globalized World*, John Benjamins Publishing Company: Amsterdam/Philadelphia, 2015, pp.125-140.

## CHAPTER TWELVE

### COMMENTAIRE AU DISCOURS DE M. MAGDI YOUSSEF SUR « LA LITTÉRATURE ARABE CONTEMPORAINE ET LA LITTÉRATURE MONDIALE. UNE PROPOSITION METHODOLOGIQUE » (PARIS, LE 26 MARS 2009)

ANDREAS PFLITSCH  
UNIVERSITE LIBRE DE BERLIN

Permettez-moi de commencer mon commentaire au discours riche, pensif, clair et net du professeur Magdi Youssef sur « La Littérature arabe contemporaine et la Littérature mondiale » en mettant l'accent sur le point crucial de la dialectique de l'échange culturel.

Dans son discours le professeur Youssef rejette le point de vue commun sur l'échange culturel selon lequel elle consiste en ce qu'il appelle « le mécanisme d'infiltration d'un élément culturel émis (ou plus qu'un) dans une autre culture et société ».

Je suis complètement d'accord avec sa proposition de surmonter ce point de vue et considérer les divers phénomènes culturels comme égaux, rejetant toute forme de hiérarchie et évaluation. Ce « point de vue apriori », comme il l'appelle, non seulement ne parvient pas à comprendre la question et est extrêmement injuste, mais d'un point de vue académique il est aussi inutile. Il est inutile car il confond la cause avec l'effet. En d'autres mots, ce type d'analyse culturelle fait partie du problème et non pas de la solution.

D'un autre côté, on ne devrait pas oublier que la majeure partie d'écrivains de ce qu'on pourrait étiqueter « classiques modernes » de la Littérature arabe comme les auteurs de la soi-disant *madrassa haditha* (Ecole nouvelle ou école moderne), Yahia Haqqi, les frères Taymour,

Tawfik al-Hakim ou Yousouf Idris, pour n'en citer que quelques-uns, ont en effet accepté (implicitement ou explicitement) la prédominance des concepts et des traditions littéraires occidentaux. Pour Taha Husayn l'Europe était un modèle à suivre, il croyait que l'Égypte devait devenir une partie de l'Europe, devenir une partie du monde moderne. Il n'accepterait aucune différence considérable entre l'Égypte et l'Europe. Les Égyptiens, écrit-il dans son livre sur *L'avenir de la culture en Égypte*, publié en 1938, doivent « chasser de leurs cœurs l'illusion affreuse et criminelle selon laquelle ils seraient créés d'une autre argile par rapport aux Européens, formés d'une autre façon, et dotés d'une intelligence différente par rapport à leurs ».

Les points de vue changèrent de façon dramatique après la défaite de 1967, lorsque des écrivains tels que l'égyptien Gamal al-Ghitani ou Idwar al-Kharrat commencèrent à rechercher de nouvelles formes littéraires s'inspirant de la littérature arabe classique. Comme al-Ghitani dit : « J'ai découvert plusieurs techniques possibles : le renversement du temps linéaire et le monologue intérieur. Le premier s'est modifié en un désir d'innover dans le style narratif même, avec un œil posé sur la littérature mondiale et l'autre sur l'hérité littéraire arabe. [...] J'ai enfin réussi à dépasser les formes conventionnelles. En d'autres mots j'ai pu me débarrasser de la sensation intérieure que j'étais dominé par les normes du roman classique. [...] Seulement maintenant je peux dire que je suis en train de commencer à bouger plus librement envers de nouveaux styles d'expression, s'inspirant de l'hérité littéraire arabe. »

Je pense qu'on doit interpréter le mécanisme de l'échange culturel d'une façon dialectique, en focalisant son potentiel créatif. Le professeur Youssef met l'accent, à juste titre, sur le côté *récepteur*, suivant Hans Robert Jauss et Wolfgang Iser, fondateurs de « Konstanzer Schule »\*, une école d'études littéraires qui se concentre sur le rôle du lecteur dans le processus de production de la littérature. Ils ont suivi le principe de la philosophie scolastique : *Quidquid recipitur, ad modum recipientis recipitur* (Tout ce qui est reçu, est reçu d'après le récepteur). D'une façon presque identique, Peter Burke a montré dans son essai sur l'échange culturel (*Kultureller Austausch*, publié à Frankfurt/M. 2000), que cet échange n'est jamais unidimensionnel et ne suit jamais une direction selon un modèle « envoyeur-récepteur ». L'échange culturel, d'après Burke, est toujours un processus de reconfiguration extrêmement créatif. Le résultat de la rencontre est toujours plus que la somme de ses parties.

Je partage aussi la position critique du professeur Youssef en ce qui concerne la théorie postcoloniale qui parfois, c'est vrai, s'avère tout simplement être une autre façon de maintenir la supériorité occidentale.

Cependant, en tant que point de départ, la théorie postcoloniale est peut-être utile puisqu'elle mène à une réévaluation des mécanismes de l'échange culturel. La théorie postcoloniale non seulement décrit-elle le précis genre de mélange d'éléments apparemment hétérogènes et la complexe interaction entre des traditions « autochtones » et des éléments « étrangers » dans la littérature arabe contemporaine, mais aussi établit-elle « l'hybridité » en tant que terme *positif* car elle a rompu avec l'ancien récit orientaliste, lequel voyait l'Occident comme « envoyeur » et l'Orient comme un « récepteur » d'« influences ».

Enfin, je voudrais faire allusion à ce qu'Ottmar Ette, professeur de Littérature romane à l'Université de Potsdam, appelle « Littérature sans demeure fixe » en tant que phénomène récent de la vie littéraire. « Sans les réseaux littéraires du monde, globalisants mais en aucun cas égalitaires », écrit Ette, « la littérature sans demeure fixe prend une dimension plus large et de plus en plus importante. A la fin d'un siècle qui a été marqué par des migrations dramatiques à une échelle sans précédent, et sur la base d'expulsions diverses dues à la guerre, la famine, les catastrophes économiques et écologiques et à la suite de la persécution politique, raciste et sexuelle, il ya eu des changements qui ont aussi point par point transformé la carte des littératures mondiales dans le passage du vingtième au vingt et unième siècle et qui continuent de transformer cette littérature ».

Cette « littérature sans demeure fixe » ne doit pas évidemment être considérée comme inférieure à la « littérature mondiale dominante ». Au contraire, elle a un avantage par rapport à l'autre, comme l'écrivaine algérienne Assia Djebar a affirmé pendant une conférence en 1997 :

« Sans patrie, sans besoin d'une hérédité : pendant au moins vingt ans j'ai aimé mon existence nomade, je me sentais bien et parfois aussi « chez moi » à Barcelone, Venise, Freiburg im Breisgau [...] Quand un homme, ou une femme, vient en Europe du sud et écrit de la littérature européenne, cela n'est-il pas un type d'« exotisme » à l'envers ? L'équivalent ou parallèle de ce qui est l'« Orientalisme » pour les Européens serait pour nous un « Occidentalisme » - pourquoi pas ?

En d'autres mots : l'Empire répond ! Donc je conclus ce commentaire en avouant que je suis un peu plus optimiste que le professeur Youssef en ce qui concerne les mécanismes et la dialectique de l'échange culturel. A l'Occident, l'étude d'une littérature non-européenne offre en général la chance d'acquérir de nouvelles idées dans sa *propre* tradition, idée qui contestent les concepts et la terminologie *occidentaux* et prennent ainsi leur revanche. On devrait arrêter de parler et penser à « nous » et « eux » seuls et commencer à nous concentrer sur la différence et la tension entre



les deux. En cette différence et tension j'attends un potentiel intellectuel et substantiellement créatif pour des débats futurs.

\* **Editorial note:** Unfortunately, Mr Pflitsch does not recognize the huge difference between my approach, which is basically social-scientific, and that of the Constance School, based on hermeneutics and on the '*Appellstruktur der Texte*'. See also my comment in this respect in my introduction to this volume. (Magdi Youssef)