# Reconceiving construction in the context of humanisation

# RECONCEIVING CONSTRUCTION IN THE CONTEXT OF HUMANISATION

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## ABSTRACT

Construction, like agriculture, is potentially the most humanising of all activities, in that it has the potential to satisfy or contribute to the satisfaction of the fundamentals outlined in Maslow's hierarchy of needs. More than this, construction has the capacity to reflect and contribute to the assertion of "being", the ongoing struggle to define and assert our authentic self. Conversely, in both process and outcome, it also has the potential to dehumanise and to negate ontological potential. This paper examines the ethical and moral challenges arising from the societal responsibilities required of and inherent in the construction industry's raison d'être. Through an examination of the literature and of selected projects, the contribution to and the negation of an authentic ethic is explored, challenging stakeholders to evaluate the positive and address the negative in such a way that construction meets its obligations to society and to individuals. Within the context of humanisation, the objective is the development of a model for construction that promotes respect for all and accords equal consideration of all and to all.

**Keywords:** ethics reasoning, humanisation, sustainable construction

## 1. INTRODUCTION

Construction does not take place in isolation. It is a product of human endeavour, and, as such, it must be contextualised within an understanding of the wider functions of human endeavour and the forms it takes, both historically and globally. The historical context relates to the continuous development of humanity from our primitive states through progressive and retrogressive states to the present, and to where we aim to go in the future. Globally, the various forms that human social interaction has adopted contribute directly to the function of construction, and the means whereby it is achieved.

Human endeavour, and therefore construction, is dynamic, and construction is not static, but is subject to and therefore amenable to directed change. Underpinning human

endeavour are individual and collective struggles for authentic being (Žižek, 2012), which is a recognition that each person, each self, is capable of becoming more than they are (Freire, 1973), of achieving self-recognition, and thereby is capable of self-actualisation (Maslow, 1943).

This struggle, referred to as the human ontological project (McAleenan and McAleenan, 2017), is the dynamic of man in his environment as he interacts with and changes it to meet his needs at all levels (see Figure 1). It reflects more than the simple dialectic of man in conflict with himself, namely the dialectic inherent in the social relations that emerge from man as a social and historical being, wherein the objectives of human endeavour, the ideologies of being, and the meaning of existence, power, and authority relationships and conflicts between self and social interests create asymmetrical developmental outcomes and social irregularities.

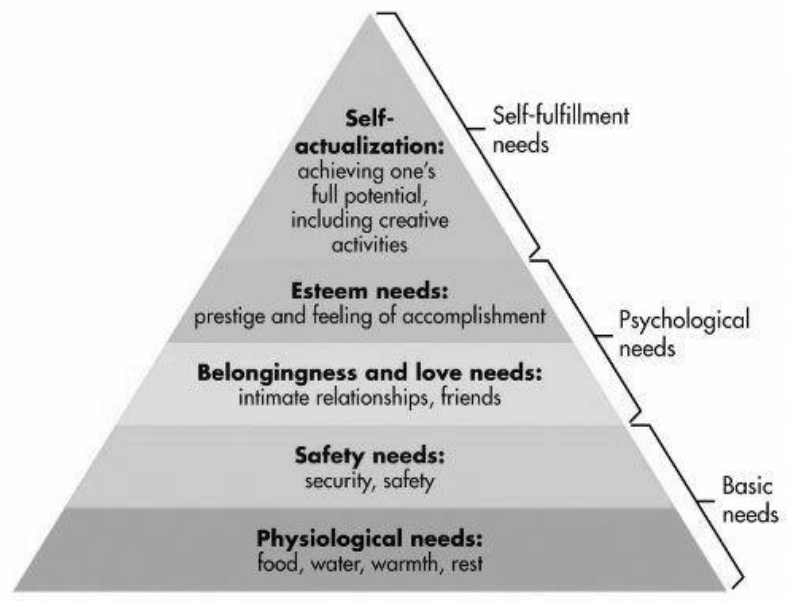


**Figure 1: Maslow's hierarchy of needs**

Abstracting construction from the range of human endeavours, this work explores its capacity for and its impacts on humanisation, namely in advancing the human ontological project. From one perspective, the social function of construction is outlined, and its impact on social relations is examined. From the second perspective, the process of construction is examining and reflecting on construction as a means of satisfying individual human needs, from the most basic level to the highest level, namely self-actualisation (Maslow, 1943). In both perspectives, construction's potential for humanisation is counterposed with examples of construction, in process and in outcome, as deniers of humanisation, that is, as dehumanising processes and social constructs.

Central to humanisation is the development of agency, which is the faculty to critically assess the environment and decide upon an appropriate course of action that will contribute simultaneously to the development of an internal ethic and an external morality (Žižek, 2012). Human moral development and the capacity for ethical reasoning has been charted by Kohlberg (1971) and Eckensberger (2007) in their work on cognitive development, which demonstrates the development of reasoning in a number of stages, culminating in the highest stage, namely post-conventional reasoning on universal moral principles, in which everyone is accorded equal consideration and respect for their dignity and worth. Current perspectives on this level of reasoning accord the whole of nature the same degree of consideration and respect.

This work considers construction in the context of the principal stakeholders and the threefold objectives of construction sustainability (McAleenan, 2015). According to these three objectives, the long-term sustainability of a construction business is based on its ability to meet the needs of

- Public interests, i.e., the community that is served by construction,
- Private interests, i.e., construction businesses, owners, and shareholders, and
- Worker interests.

## 2. METHODOLOGY

A critical theory methodology was adopted to carry out this work. An analytical tool developed by the Frankfurt School of Social Theory and Philosophy, critical theory brings together various disciplines in the humanities, in order to transcend simple analysis and description of society, and to facilitate social change. According to this theory, science and engineering are not neutral practices divorced from the vagaries of human biases and the social relations and structures in which they are embedded (BSSRS, 1975).

The British Society for Social Responsibility in Science (BSSRS) has the following to say about the ideology of "scientism":

> The ideology of 'scientism' and its claim to be 'neutral' and 'objective' are powerful weapons for mystification and domination in the hands of our rulers. Increasingly decisions which are essentially social and political decisions are taken behind a smokescreen of scientific objectivity. If challenged such decisions are justified (and hence put beyond further challenge) by appeals to the neutrality of science and impartiality of scientists. (BSSRS, 1975:3)

Deconstruction, a Derridan (Derrida, 1995) tool applied to the field of literary analysis, provides a means to delve into the meanings and uses of language in construction, to arrive at new and different perspectives of key stakeholders impacted by the process of and the outcomes of construction. These shifts in perspective, seen from the social and historical experiences of the impacted stakeholders, provide a varied and often contradictory understanding of construction and the benefits morally ascribed to it. A semiotic analysis of the artefacts produced by construction, e.g. street furniture, have questioned the validity of architectural solutions to the client's definition of, and therefore requirements in relation to, the impacts of their work on the whole community,

including those specifically and negatively targeted by the outputs, e.g., homeless people, the youth, etc.

Critical theory has a particular focus on cultural analysis, particularly in view of the growing emphasis on "safety culture" (McAleenan, 2016a) in the construction process. Narrow simplistic definitions of culture, e.g., "the way we do things here", have been rejected in favour of a comprehensive and complex interpretation of the human/environmental dialectics in the makeup of cultures with a perception of continuity (Dawkins, 1993), connectivities that are regarded as being critical to an understanding of human existence and being. Man and events are continuous, in that they have emerged from a past, they impact on the future, and in the present they are infinitely interconnected with the surrounding environments.

At this point it is worth emphasising that construction and agriculture are the two fundamental achievements of man as a social and historical being, and the most visible anthropogenic effects on the planet. The Anthropocene epoch is the current geological age, and it is defined by man's pollutions (radioactive and plastic) being recorded in the geological record (McAleenan, 2016b).

Historically, the development of agriculture released man from the daily pursuit of the means of survival and created the surpluses in production that permitted the division of labour within the now settled communities. This permanence of settlement and the division of labour are the foundations of civilisation, of construction and progress towards attaining the higher levels described in Maslow's hierarchy of needs (see Figure 1). The ubiquitous nature of construction, from extraction to the built environment, and the infrastructure networks that criss-cross the landscape speak to the success of man. The urban environments that man has built embody successful satisfaction of needs, from the need for shelter and warmth (e.g. housing, energy, and sanitary services), to the need for health and security (e.g. hospitals, schools, and factories), to the need for self-actualisation (e.g. universities, sports facilities, museums, leisure facilities, etc.). The human environment reflects the attainment of the social "good", which is at the centre of ethical and moral behaviour (Fromm, 2003). The collective endeavours necessary to build and maintain the human environment reach out to care for the other, through provision of housing, sanitation, energy, health, welfare, and education facilities and opportunities. Individual self-development is facilitated via the opportunities afforded by the higher levels of education, the arts in museums, galleries, and concert halls, and the opportunities for physical excellence in the sports and health centres of excellence, which are integral features of even the smaller urban environments. Nevertheless, this rosy picture hides a reality about the urban environment, where the ability to advance the humanisation project is not equally accessible or available to all, which is a fundamental feature of the highest level of ethical reasoning, i.e., equal consideration and respect for all (Eckensberger, 2007).

Inequalities exist, and historically they have done so since the earliest periods of urbanisation and the division of labour. The division of labour transformed the social relations of production, such that the surpluses that allowed for the construction of towns and cities could also be expropriated and accumulated in private rather than in public hands, thereby creating extreme authority and power relations, which is a feature of but not necessarily a function of civilisation and urbanisation, such that today, eight people have

the same personal wealth as 50% of the global population (Credit Suisse, 2016; Oxfam, 2017).

The manifestation of these inequalities, and the dehumanisation that results, is clearly evident in the built environment, both in the artefacts of that environment and the processes involved in constructing them. Cities may appear as objective monuments to man's progress, but under scrutiny, they are a reflection of man's subjective interpretation of the world that he inhabits. Something as apparently innocuous as street furniture, which is mainly functional artefacts to light the streets, to ease the flow of pedestrian and vehicular traffic, to provide comfort, etc., serves also as a means of social control (Swain, 2013). The Camden bench (see Figure 2), with its abstract beauty, is an icon of "aggressive architecture", as it was designed to prevent antisocial behaviour, such as graffiti, drug dealing, and rough sleeping (Swain, 2013). Addressing the problems of the urban environment by preventing behaviours that are symptoms, rather than addressing the cause of the problem, means that the real problem is obscured, and those who are homeless, for example, are lumped together with those who deal in drugs, and they are equally dehumanised in the process. The client's brief, and the design solutions, have considered the problem not as one of homelessness, but as one concerned with the sensibilities of the non-homeless user of the city. Similar thinking to remove the homeless from the city centre influences design solutions such as cobbling and sloped surfaces, to prevent sleeping in underpasses, on window sills, and in doorways (Korody, 2016a, 2016b, 2016c). Neither the client nor the designer nor the contractor questions the validity of the brief, and what the brief and the solutions say about these stakeholders' perception of the function of the city, and the contribution that architecture makes to human progress or regress.

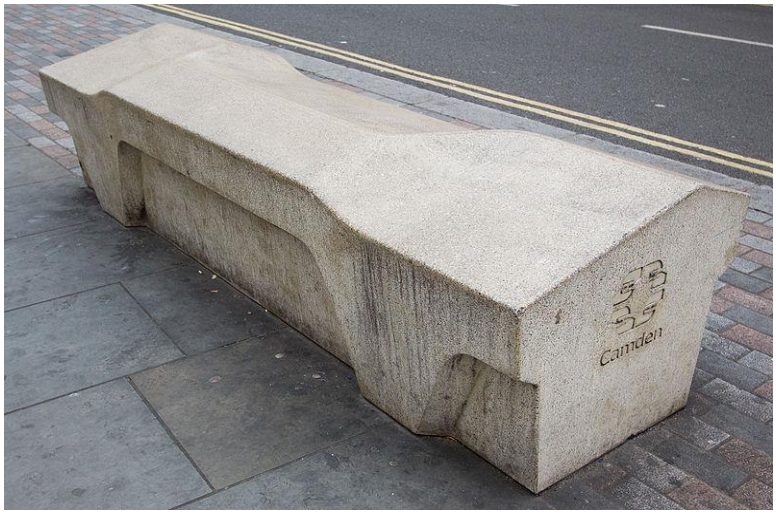


**Figure 2: A Camden bench outside Freemasons' Hall on Great Queen Street, London**

On a grander scale, construction projects contribute significantly to social control, and not always by deliberate intent of all the parties to the project. The process of gentrification, controversial in the contemporary period, is a process that can, by intent, or as an incidental consequence of other activities, transform the demographics of an urban area, to the detriment of the "poorer" original residents (Dooling, 2009; Jaffe, 2014; Haffner, 2015; Hatherley, 2017). For example, the High Line project in New York has had the effect of raising the profile of and the value of property in the Chelsea district, through which it runs, such that a previously "rundown" area has now become a focus of real estate development and expensive apartments. Concomitant with this has been the loss of the pre-existing population and established businesses due to higher rents being imposed. Similar occurrences of gentrification are being recorded in cities worldwide, and have been occurring for many generations (Quastel, 2009; Tracey, 2016). The redevelopment of Paris in the 19th century, following the revolutions of 1790, had a similar effect of removing the poor from the city centre and reconstructing the city with wide boulevards, designed as much to prevent the barricades of the revolution reoccurring as to gentrify the city (Sagner-Düchting, 1998). The Parisian boulevards are an example of architecture and construction for social control. Elsewhere, walls, some of them called "peace walls", have been erected to separate communities, such as in Belfast (Goodyear, 2012; Garcia, 2016), Berlin, and Palestine (Sharif, 2009), and it was even proposed that a wall be built between the USA and Mexico. Gated communities are designed to keep people out or manipulate the flow of residents in and out of an area, as in some of the designs for redeveloped housing estates in Northern Ireland in the 1970s. These communities are now reaching the point where the creation of private cities is seriously being considered, such as in Honduras (Associated Press, 2012), or where such cities have been constructed, such as in Gurgaon, India (Doshi, 2016), with issues of separation of communities or loss of land by certain people. Political and military occupying forces are using demolitions as collective punishments and settlement construction to alter the demographics and transform the political landscape (UNSC, 2016), or they have done so to contain and restrict support for insurgents, as in Vietnam in the 1960s and 1970s, or to separate ethnic groups, as in South Africa during the apartheid era.

Sport and sporting excellence contributes to the humanisation project, affording the urban dweller opportunities for relaxation, health, and socialising, as well as attainment of high performance. Its commercialisation, and the advent of global megasports projects, such as the Olympics and the World Cup, has created environments that negate equality and concentrate the benefits into the hands of a few, as monetised benefits and wealth. The negative consequences of Olympic projects since 1948 have been grossly disproportionate, resulting in massive municipal debt for the host cities (Johnson, 2012) (although this argument is countered by Rose and Spiegel (2009), whose study suggests that Olympic hosts benefit in the long run from increased trade), in the form of substantial decanting of populations to make way for the construction of stadia (Watt, 2013), acquisition of public space, or transformation of it into private or commercial space (O'Bonsawin, 2010), or, in one of the worst recent examples of a dehumanising process, the death of approximately 1,000 migrant workers on the Qatar World Cup projects (Gibson, 2014).

Environmentally, there is no question that construction has impacted on the landscape. The landscape that we see worldwide is a product of the influence humans have on nature; there is little that has not resulted from human intervention, either directly or indirectly (Berger,

2010). The task of humanisation is not to exploit nature to human advantage and progress, but to recognise ourselves as part of nature, dependent upon its health and well-being for our own health and well-being, a sort of mutualistic symbiotic relationship. Humans ignorant of their impacts on nature assume instead that we can "exercise, permit and adapt to" the changes we make to the environment (Soulé, 2010). Roads, for example, and other exurban developments can impact on the environment many kilometres into unfragmented habitat (Soulé, 2010). How much more, then, do larger-scale urban projects, extraction sites, and heavily used transport networks impact upon the "natural" environment, and what unknown detrimental effects will they have on the human project?

## 3. PROCESS

With over 100,000 deaths per annum, construction remains one of the most dangerous industries (Walters, 2010), not because it is a high-hazard industry (which it is) (other high-hazard industries, such as power generation, potentially present more hazards, but, conversely, are safer, with very low to zero "risk"). It is dangerous because of factors peculiar to the industry. Its dynamic and transient nature, where projects are continually day by day evolving from groundworks to completion, its heavy reliance on temporary, and often unskilled, labour, the high competitiveness of the tendering and contracting processes, narrow margins, poorly defined specifications, allowing for contractors to interpret too widely their meanings, poor standards of materials, and low wage corruption at high, medium and on-site levels.

The result on-site is low safety levels, a high number of health infractions, and little concern for the short- or long-term well-being of the workforce, which is reflected both in the low wages paid and the unsatisfactory workplace conditions. Migrant workers suffer disproportionately, with lower than minimum wages, poor working and living conditions (Gibson, 2014), and increased levels of discrimination (O'Connor and Goodwin, 2012). Additionally, on multilingual sites, workers experience communication blocks, with critical information often being conveyed in the form of pictographs and oversimplified multilingual phrases and signs (HSA, 2008; Hare et al., 2013). Whether in work camps or in city lodgings, isolation and separation from family and community support networks leads to personal isolation, with consequent increases in mental health problems and addictions (O'Connor and Goodwin, 2012). The various waves of Irish migration in the 19th and 20th centuries saw the major groups of the migrants being recruited in racialised employment as unskilled labour on construction sites (O'Connor and Goodwin, 2012), where they were subjected to racial and religious abuses and discrimination. Blacklisting programmes disadvantage workers when union officials and safety advocates are listed and denied the opportunity to work in the industry, as has happened in the UK. The message is clear, namely that organising to improve terms of employment and conditions of work is unacceptable to the contractors, and that workers on construction sites must accept the conditions offered.

Addressing the skills deficit, especially in terms of OSH competencies, the ISSA education section has advocated integration of OSH education and training into vocational and professional programmes of study in colleges and universities that supply the industry with skilled trades workers and professional workers (ISSA, 2003). The industry has yet to understand and fully embrace the concept that OSH competencies are integral to the competences and skills of the trade or profession or in interpreting the various iterations of

the CDM regulations in the UK (HSE, 2014). Some employers have a focus on the lowest levels of OSH training embodied in the evidentiary base of the baseline construction-focused quasi-skills card, which is an item gained following a one-day general training programme, to be repeated every three years. Despite the fact that this card has been used for over two decades, and the fact that workers have been led to believe that they must have this card in order to get onto the site, fatalities, injuries, and ill health in the industry remain high, at approximately three times the average rate for other industries. That said, there has been progress in the UK, with the recent Health in Construction summits of 2016 and 2017 (HCLG, 2017), where the leading chief executives of the construction industry came together and asserted that construction workers' health and the health of those impacted by our infrastructure development has to become a force for good. One clear message that has emerged is that as an industry, we need to start to see the construction industry as a people industry, and not as an industry concerned with the use and abuse of construction and steel. We are not a bricks-and-mortar industry; bricks and mortar are simply some of the tools/materials that we use to promote and enhance social well-being and increase the health of our society (HCLG, 2017). What do we benefit if we harm those who work to make this a reality? Besides addressing the more obvious (although often neglected) hazards that impact upon our physical state, it is also incumbent upon us to ensure the mental health and well-being of all stakeholders, our construction fraternity, and the users/end users of our products. One overarching question for designers has to be "What can we do as designers to prevent mental health suffering within the construction workforce?" This is a challenge that is perhaps new and slightly alien to construction design professionals, but it is one that speaks to the humanity of structural, and not just social, engineering. Much of this work is in its infancy, and the months ahead should deliver much more of the needed detail, as the various professional bodies converse. Further evidence of construction coming to terms with the need to meet the challenge of "humanising" is the introduction of various higher education programmes; for instance, Ulster University has introduced "ethical reasoning" as an integral part of both their civil engineering and their quantity surveying undergraduate degree programmes (McAleenan, 2016a). Students at the University of Melbourne work with workforces in dramatically different cultural contexts – in rural Thailand, and in an indigenous Australian community – addressing among other things language difficulties, cultural and ideological differences and various physical competences to ensure delivery of safety on the different worksites (O'Brien and Hill, 2009). Education as a means of social praxis promotes dialogic learning, that is, it requires both interpretation of the subject and judgement of its worth and meaning, and that is the challenge to all educators in the construction field (McAleenan, 2016a). The challenge to the academic researcher is to deliver to the rest of the industry solutions or choices that will enhance and improve OSH, which will be derived from time devoted to thinking, contemplating and making sense of the many challenges of today.

## 4. HUMANISATION

The challenge in construction is to reconcile its function to provide for social needs with satisfaction of private interests. In the public sphere, where major social interests are played out, this will require opening up of genuine dialogue amongst all the stakeholders on the purpose, needs, and desirability of new projects, respecting throughout that those stakeholders most affected by the project, through decanting of populations, loss of amenities, adverse economic impacts, etc., must have a genuine and effective decision-

making role. In national jurisdictions that permit public consultations on these matters, this exercise should go beyond the appearance of "having a say", and should provide for full participation in and input directly to the decision-making process. To facilitate this process, full and honest disclosure of all information is essential in order that informed decision-making can occur.

The essence of social "good" is at the core of good construction, and this requires an analysis of the impacts of the project, with the negative as well as the positive being opened up for examination. The first of the three objectives of sustainable construction is that it must be good for society, and these social considerations take precedence over private interests, e.g. shareholder gain. In this, it falls to the legislature to ensure that within building and construction statutes and government policy this social benefit is the driving objective, both informing the statutory planning agencies of their focus and guiding clients and developers to accord sufficient prominence to the public good in their business activities. When considering the collapse of the Rana Plaza building in Bangladesh, and the 1,135 fatalities that occurred there (FCO, 2014), the degree of collusion between business owners, contractors, and public servants that led to the disaster is the result of national policy failures and the absence of sufficient checks and balances (ILO, 2015a). Construction in general and projects specifically need a potent system of checks and balances at all stages, so as to ensure that the projects meet public interests, adhere to current technological standards, and are constructed and maintained in accordance with consistently high levels of technical capacity and social competence.

Adhering to the social benefit objective extends to the process of construction, wherein the safety, health, and well-being of the construction worker and the end user are accorded due respect and equal consideration. Workers' trade and professional interest in employment is secondary to their interest in the industry as a source of employment, as a means of satisfying their fundamental human needs. For some, satisfaction of these needs may be their only interest; for others, the industry provides the means of also satisfying the higher-level needs, including the need for social interaction and the need for self-actualisation. The Seoul Declaration (ILO, 2008) places an emphasis on employment and work as being a significant contributor to human well-being. In practice, this means meeting the basic requirements for "decent work" (ILO, 2015b), beginning with compliance with the minimum standards for safe and healthy workplaces, providing sufficient remuneration, to enable workers to know that their employment will meet their personal and social needs, and providing security of employment.

Satisfying well-being extends the obligation to employers of more than mere compliance with minimum standards. Respect for the individual, a key element of a mature ethical reasoning (Eckensberger, 2007), means respect for the worker as an equal, respecting their competence and their agency. This entails a reappraisal of employment hierarchies of authority, wherein the wage payer (the employer) exercises authority over those who are paid wages, via the hierarchy of managers. This structure requires the fundamental relationship wherein the employer who pays the wages needs the employee to produce the capital in order for their wages to be paid. Notwithstanding the transactional relationship between employer and employee, once the contract of employment, or the building contract, exists, the parties to the process of construction can be viewed as partners in the enterprise, each contributing a necessary element to the project, and each respected equally

for that input. This is at the heart of the CDM regulations in the UK, wherein the key duty holders are statutorily obligated to work within their competencies, to inform the line manager and others in the team of their legal duties and obligations, and to jointly make decisions on all matters, from the earliest design stages to the completion of the project. Extending this principle to all parties to the project builds a culture of communication, as opposed to one of instruction, and depends for its success on cooperative participation, agreed objectives, open information, including financial records, and individual and collective agency. This model was successfully applied by the Semco company in Brazil (Semler, 2001).

The third objective of sustainable business addresses that which is good for the business or businesses involved in the project. Successfully addressing societal and worker interests does not negate business interests, it moderates these interests by balancing them with attainment of social benefit at societal level and at the level of individual needs. Where shareholder needs are prioritised over social and worker needs, businesses retract, and even close, to preserve the financial "bottom line". Thus, in times of recession, smaller contractors shut down, and workers are made redundant. The history of the Lavaca movement in Argentina (Lavaca Collective, 2004) demonstrates that the collective input of the workforce to problem solving is capable of ensuring the success of the business on a modified model, based on prioritisation of human needs over excessive profits. Hotels, factories, etc., closed by the owners were taken over and reopened by the redundant workers and successfully operated on a cooperative basis, to ensure that the workers and their families and communities retained the means of survival and self-worth. The collective mind can address problems in novel ways that, even based on simple "self-interest", ensure, in theory, the interests of all.

Successful business sustainability is an interrelated mix of satisfying public, private and worker interests. It is in this context that humanisation progresses. A humanising construction is not concerned with erecting on the landscape vainglorious monuments to architects, politicians, or profit, but is concerned with realisation of the potential of all, equally and with full respect.

## 5. CONCLUSION

Construction, as realised in practice, is problematic whenever the projects, from mega to minor, conflict with the fundamentals of human dignity and decency, whether in the building of megasports projects that displace communities, or in projects that expose workers to extremely bad conditions, or in projects that degrade the environment through a lack of concern, or by good intentions poorly informed by the science of ecology. This work advocates adopting a new approach to construction that places humanisation and man's attainment of authentic being at its heart. Future research to achieve this objective will need to examine the societal and political models for construction planning and policies. It needs to look at the social relations of and within construction and learn from models of successful cooperation, as well as models mooted but never applied, in order to develop appropriate national and cultural models that will restructure those relationships in a manner that will advance the human ontological project.

Ultimately it will require a review of education practices that will ensure that ethics and ethical reasoning are integrated into primary, secondary and tertiary education, so as to

evolve trades and professions that uphold the principles of universal respect and equal consideration for man and nature.

## 6. ACKNOWLEDGEMENT

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