

The Theory of Post-Industrial Society

Teori Masyarakat Pasca-Industri

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ABSTRACT

*This article attempts at firstly looking at Daniel Bell's background and thereafter discussing selected themes of his thoughts regarding to the future society. This will be done by scrutinising his main intellectual works, particularly with regards to his theoretical analysis on the future society, namely the post-industrial society. The books are *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (1973), *The Cultural Contradictions of Capitalism* (1976) and *The End of Ideology* (1960). Other materials written by Bell were also consulted wherever related. The methodology applied in this article is content analysis whereby key words related to post-industrial society such as knowledge, change and technology were analysed, criticised and thereafter used to understand the underlying framework or worldview that constitute the scholar's ideas. The discussion on the results of this worldview suggests that the logical movement of history works in its deterministic way in which problems faced by the societies such as injustices, inequalities, poverty, racial divisions and so on will cease away and that the society will move towards a better and more desirable order. It is hoped that this article would contribute significantly to deepening our understanding on the discourse of the post-industrial society, and how it relates to our current context.*

Keywords: Theory; post-industrial; future society; social change; Daniel Bell

ABSTRAK

*Artikel ini melihat latar belakang Daniel Bell, dan kemudiannya membincangkan beberapa tema pemikirannya berkenaan masyarakat masa depan. Hal ini dilakukan dengan menganalisa beberapa hasil karya beliau, terutamanya yang berkaitan analisis teori berkenaan masyarakat masa depan yang dikenali sebagai masyarakat pasca-industri. Karya-karya tersebut adalah *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (1973), *The Cultural Contradictions of Capitalism* (1976) dan *The End of Ideology* (1960). Karya-karya lain yang ditulis oleh Bell juga dirujuk, di mana yang berkaitan. Metodologi yang digunakan dalam artikel ini adalah analisis kandungan di mana katakunci yang berkaitan dengan masyarakat pasca-industri seperti ilmu pengetahuan, perubahan dan teknologi dianalisa, dikritik dan kemudiannya diguna untuk memahami kerangka asas atau pandangan alam yang membina idea-idea tokoh. Perbincangan terhadap hasil pandangan alam ini mencadangkan bahawa pergerakan yang logik bagi sejarah berfungsi secara deterministic di mana permasalahan yang dihadapi oleh masyarakat seperti ketidakadilan, ketidaksamarataan, kemiskinan, pengasingan kaum dan sebagainya akan selesai dan masyarakat akan menjadi lebih baik dan tersusun. Justeru tulisan ini diharap dapat memberi sumbangan dalam memperdalam kefahaman kita terhadap diskusi mengenai masyarakat pasca-industri serta bagaimana ia berkait dengan konteks masyarakat hari ini.*

Kata kunci: Teori; pasca-industri; masyarakat masa depan; perubahan sosial; Daniel Bell

INTRODUCTION

The theory of Post-Industrial society was firstly introduced by Daniel Bell, a sociologist-cum-futurist. Daniel Bell was born in 10 May 1919 in the Lower East Side of New York City from a Jewish family who mostly had chain-migrated from Bialystok, an area that lies between Poland and Russia. Bell's academic career began in 1945 after accepting a three-year appointment teaching social science at the University of Chicago. During

the *Fortune* years between 1952 until 1956, he became an adjunct lecturer in sociology at Columbia University. In 1958, he decided to move out of journalism permanently as an Associate Professor in the same university where he received his PhD. in 1960. The thesis was a compilation of his published work and he was then promoted to full Professor in 1962. Later in 1969, he moved to Harvard and was appointed to the prestigious chair as Henry Ford II Professor of Social Sciences in 1980 (Daniel Bell 1973: 15). Bell retired from his professorship

in 1990 but remains a Scholar-in-Residence at the American Academy of Arts and Sciences in Cambridge, Massachusetts (ibid: 15-16).

Upon reflecting the developmental stages of his concept of post-industrial society, Bell stated four works that influenced his thoughts:

1. The implicit theme in his first book, *The End of Ideology* (1960) in which he examined the role of technical decision making in society and the exhaustion of old political passions. He argued that contradicted to the misapprehensions that brought by the title of the book, his genuine argumentation was that “the exhaustion of the old ideologies inevitably led to a hunger for new ones.” (Bell 1973: 34).
2. A series of studies he did in *Fortune* magazine in the early 1950s on the changing composition of the labour force whereby the decline of unskilled workers took place coincidentally with the increase of technical and professional employee in the occupational system (Bell 1973: 34).
3. His rereading of Joseph Schumpeter’s work, *Capitalism, Socialism and Democracy* on the notion of technology as an open sea had turned his mind to the question of technological forecasting and the feasibility of its role of charting technology in order “...to iron out the indeterminacy of the future.” (Bell 1973: 34)
4. An essay by Gerald Holton, a physicist and historian of science on the significance of theoretical knowledge and the codification of theory (Bell 1973: 35).

Producing fourteen books, including such classics as *The End of Ideology* (1960), where he examined the fading of Marxism in American intellectual life and the rise of a new post-ideological generation for whom the radical passions of the 1930s were no longer relevant (Wagar 1996: 50). In *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (1973), he anticipated America’s future in which the great majority of workers will find employment in professions and services. The book appeared in 1973, but Bell launched the concept of ‘post-industrial society’ as early as 1962. The principal source of wealth, he argues, will be information, grounded in the empirical sciences. Bell has revisited and fine-tuned his prognosis of a “post-industrial” society in his 1987 *Daedalus* article “The World and the United States in 2013.” Another book, *The Cultural Contradictions of Capitalism* (1976), follows his study of the disintegration of ideology

with a plea for the renewal of religious faith (Wagar 1996: 50).

His works have huge influence in the study of social development in the Western world, particularly his theory of post-industrial society which he propagated consistently and persistently since the past 40 years. *The End of Ideology* and *The Cultural Contradictions of Capitalism* have appeared in the list of the 100 most important books of the second half of the twentieth century of the Times Literary Supplement (http://www.pbs.org/arguing/nyintellectuals_bell.html).

THE POST-INDUSTRIAL SOCIETY

This section aims at exposing Bell’s ideas within selected thematical discussions, mainly pertaining to his future idealism and his views on contemporary and future challenges. This is done firstly by analysing the concept of his future idealism – the post-industrial society – followed by discussing the contemporary and future challenges that he views will be facing the future society. The contemporary and future challenges are knowledge, change and technology and its relation to his theory of future society in the form of the so-called “post-industrial society”.

Bell draws the discourse mainly in his masterpiece, *The Coming of Post-Industrial Society* (1973), and also his other famous works, *The End of Ideology* and *The Cultural Contradictions of Capitalism*. Other less popular works written by him were also consulted wherever related. In proposing the theory of post-industrial society through *The Coming of Post-Industrial Society*, Bell clearly stated that the main thesis in the book is that “... the major source of structural change in society is the change in the character of knowledge: the exponential growth and branching of science, the rise of a new intellectual technology, the creation of systematic research through R & D [research and development] budgets, and, the codification of theoretical knowledge.” (Bell 1973: 44)

Elucidating the debate on post-industrial society in the Introduction of his book, he says: “In the last hundred and fifty years, the social tensions of Western society have been framed by these contradictory impulses towards equality and bureaucracy, as these have worked themselves out in the politics and social structure of industrial society. Looking ahead to the next decades, one sees that the desire for greater participation in the decision

making of organizations that control individual lives (schools, hospitals, business firms) and the increasing technical requirements of knowledge (professionalization, meritocracy) form the axes of social conflict in the future.” (Bell 1973: 8)

Bell also acknowledges that the identification of what he called as “historical keys” in the verge of historical transition that he attempts to study is quite tricky. He analyses it within the social frameworks which he regards as “...the structures of the major institutions that order the lives of individuals in a society: the distribution by occupation, the education of the young, the regulation of political conflict, and the like. The changes from a rural to an urban society, from an agrarian to an industrial economy,

from a federalised to a centralised political state, are major changes in social frameworks.” (Bell 1973: 8). Agrarian structure, as can be seen in the favorable man-land relationship is no longer tenable because of unproductive use of manpower (Gao 1987: 8). Therefore, he emphasizes that those major changes allow the human society “...to identify an “agenda of questions” that will confront the society and must be solved” (Daniel Bell 1973: 8-9). The theory therefore, is not a mere prediction, but rather setting a schema or an outline for future society. To show the distinct features of human development, Bell outlined a conceptual scheme as demonstrated in Table 1.

TABLE 1. General Schema of Social Change

	PRE-INDUSTRIAL	INDUSTRIAL	POST-INDUSTRIAL	
Regions:	Asia Africa Latin America	Western Europe Soviet Union Japan	United States	
Economic sector:	Primary Extractive: Agriculture Mining Fishing Timber	Secondary Good producing: Manufacturing Processing	Tertiary Transportation Utilities Quinary Health Research Government Recreation	Quaternary Finance Insurance Real estate Education
Occupational Slope:	Farmer Miner Fisherman Unskilled worker	Semi-skilled worker Engineer	Professional and technical Scientists	
Technology:	Raw materials	Energy	Information	
Design:	Game against nature	Game against fabricated nature	Games between persons	
Methodology:	Common sense experience	Empiricism Experimentation	Abstract theory: models, simulation, decision theory, system analysis	
Time perspective:	Orientation to the past Ad hoc responses	Ad hoc adaptiveness Projections	Future orientation Forecasting	
Axial principle:	Traditionalism: Land/resource limitation	Economic growth: State or private control of investment decisions	Centrality of and codification of theoretical knowledge	

Source: The Coming of Post-industrial Society (Bell 1973: 117)

The concept of post-industrial society, therefore, is an analytical construct, or a conceptual scheme, not a picture of a specific or concrete society, as he insists: "It is a paradigm or social framework that identifies new axes of social organization and new axes of social stratification in advanced Western society...As a social system, post-industrial society does not "succeed" capitalism or socialism but, like bureaucratization, cuts across both. It is a specification of new dimensions in the social structure which the polity has to manage." (Bell 1973: 114).

In *The Coming of Post-Industrial Society*, Bell sought to demonstrate how technology and the codification of theoretical knowledge were shaping future society in the techno-economic order, and consequently, the society's bureaucratic and hierarchical system. He also stresses that unlike almost other contemporary social scientist who think society as some unified "system" or as a monolithic one, he, on the contrary believes that this view is misleading, and modern society should be analysed by regarding it as "an uneasy amalgam of three distinct realms." (Daniel Bell 1996: xxx). These realms, according to Bell, are first, the social structure or the techno-economic order; the second is the polity and finally the culture (Daniel Bell 1996: xxx). The idea of post-industrialism is therefore limited to changes in the techno-economic order. All the three realms in modern society, he emphasizes, are ruled by distinct axial principles, in which have resulted in tensions and conflicts within Western society for the past 150 years; the rules for the techno-economic order is efficiency; for the polity, it is equality and for the culture, self-realization (Bell 1996: xxxi).

Bell (1973: 7) rejects what he considered as "seductive and simple" visions of the future and proposed instead what he claimed as "a more complex and empirically testable sociological argument." Linked to this is his criticism on nihilism, which he sees as representing such simplistic a vision of future. His arguments are based on two reasons: first, the distortion of historical time, in which the nihilists viewed the world and social change in an apocalyptic perspective. This view, according to Bell, resulted from a tradition preoccupied with revelation. He argues that the structures of a society are not reversed overnight; in fact, he believes that societal structures change much slower because the processes of changing the habits, custom and established tradition are more complex, long and

difficult (Daniel Bell 1973: 7-8). The second argument is with the monolithic view of society, in which he ascribed to Hegel and Marx. This view regards society as a "structurally interrelated whole" and governed by some unified inner principle. Bell (1973: 8) lamented that "...[i]n this view, history is dialectical, the new mode negating the previous one and preparing the way for the next to come, the underlying tow being the *telos* of rationality."

Bell's interest in the structure and functions of education, especially of higher education revealed almost as a passionate commitment in the 'post-industrial society', where his belief in the virtues and possibilities of the university leads him to overstress its capacity to determine the future shape of society (Bell 1973: 89). He believes that education should be liberal, that is, open in the opportunities that it offers and in providing individuals with the chance to discover their own identity in relation to the stock of human knowledge, rather than doctrinaire or inculcates, insisting that their identities should be cast from a common mould – a pluralistic tune of different identities. Bell specifies the content of liberal education more closely through the purposes: To overcome intellectual provincialism, that is, the myths, ideologies and biases that people can hold by their formative experiences and the narrow specialization that can be acquired by training in a particular expertise (Bell 1973: 92).

Far more important in the social realm of the post-industrial society, Bell indicates, is that more people are becoming a "communal society" in which the public sector has a greater importance and in which the goods and services of the society – those affecting cities, education, medical care, and the environment will have to be purchased jointly. Hence, this creates the problem of social choice and individual values and the question of how to reconcile conflicting individual desires through the political mechanism rather than the market that can cause a potential source of dissension. In this relation, the relation of the individual to bureaucratic structures will be subject to even greater strain (Bell 1973: 95).

In the management realm, Bell (1973: 111) believes that the increasing centralization of government creates a need for new social forms that will allow the citizenry greater participation in making decisions. He argues that the growth of a large, educated professional and technical class, with its desire for greater autonomy in work, will force institutions to reorganize the older bureaucratic

patterns of hierarchy and detailed specialization. The individual in this ultra-advanced society, he concedes, will live longer and face the problem of renewed education and new careers.

On the familial plane, Bell insists that the family is the source of primordial attachment that may become less important for the child, in both his early schooling and his emotional reinforcement. With this detachment, there will be a more mobile and more crowded world, raising problems of privacy and stress. He elucidates that the new densities and “communications overload” may increase the potentiality for irrational outburst in the society. Finally, Bell anticipates that there is the growing disjunction between the “culture” and the “social structure” in which society becomes more functionally organized and directed to knowledge and the mastery of complex bodies of learning. The culture, on the other hand, becomes more hedonistic, permissive, expressive, distrustful of authority and the purposive, delayed-gratification of a bourgeois, achievement-oriented technological world (Bell 1973: 123).

He argued that decision making process will become the main characteristic of the post-industrial society which stipulated by social choices that reflected by individuals “ordering” preferences. But these social choices, as he referred to The Condorcet paradox developed by Kenneth J. Arrow, cannot be created. The only possible way, in his view, is the bargaining power between groups, which he believes unattainable at the present society where mechanisms for social accounting and verification of social goals did not exist (Bell 1973: 43-44).

Generally, the theory of post-industrial society as purported by Bell can be understood within the grand theories in sociological studies (Gusni Saat, 2019). In specific discipline such as the field of Development Studies that research on political upheavals and socio-economic transformation in post-colonial countries, uni-lineal social evolution is perceived as the necessary stages of development that post-colonial countries will have to achieve in order to be industrialized nations like the West (Madeline Berma & Junaenah Sulehan 2004: 3). By stressing the nature of post-industrial society, Bell indirectly confirmed the fact that future society is nothing more than an extension of Western idea of modernity as in Kumar’s analysis in *From Post-industrial to Post-modernity: New Theories of the Contemporary World* (Krishan Kumar 1995: 55) when he clearly stated that the post-industrial

cycle within the United States national economy will be repeated at the global level. The social and technological determinism that follow the world’s advancement into modernity in Western term henceforth seals its fate in the future.

KNOWLEDGE, CHANGE AND TECHNOLOGY IN THE POST-INDUSTRIAL SOCIETY

Bell’s theory of the post-industrial society predicts the emergence of a post-industrial society that represents a dramatic change in the social framework of the Western world, specifically, the United States. Certainly, there is considerable evidence to support his speculations of the coming of the knowledge or information society: (1) the shift from a goods-producing to a service economy, (2) the rise of the professional and technical classes, (3) the axial principle of the centrality of theoretical knowledge as the source of innovation and of policy formulation for the society, (4) the spread of information technology, (5) the increase in future orientations, and (6) the increasing importance of the ‘axial structures’ of the university, research organizations and other intellectual institutions, among other things. A major engine of social change for Bell is the growth of knowledge, especially theoretical knowledge, and a new intellectual technology, while a major steering mechanism for the direction of change is the character of the political managers who have the power of decision.

There are, according to Bell, three types of technology as been conveyed from the historical development of technology. These three types of technology are categorized according to their specific technological innovations, in which the pre-industrial society was characterized with muscle-based technology; whereas the industrial society, with machine-based technology and the post-industrial with knowledge/intellectual technology. In discussing the post-industrial technological revolution, Bell identifies four technological innovations that are:

1. The change of all mechanical and electric systems to electronics – electronic systems is obviously based entirely on intellectual technology because it is mathematical calculations and the writing of software and programs that allow them to function.
2. Miniaturisation – the shrinkage of devices that conduct electricity or switch electrical impulses.

3. Digitalisation – information is represented by digits/digital form.
4. Software – frees the user to quickly and easily do various tasks without having to learn an entire programming language (Bell 2001: 115)

Although the new post-industrial society is basically based on intellectual technology, Bell (2001: 11-12) disregarded the overwhelming attitude and reactions toward technological changes. He argued that one must not be confused by “the pace of change” and how people have to keep abreast with new theories and new technologies that caused “cultural lag”, which is the social equivalent of jet lag.

Moreover, contradicting the belief of the “uncontrolled technology” as purported by another futurist, Alvin Toffler (1971), Bell on the other hand believes that “...the crucial question today is thus not simply whether you can ‘keep up’ or ‘run fast enough’, but rather where you want to run and how. Our concern should not be whether or not ‘culture’ is lagging behind technological change.” (Daniel Bell 2001: 21). For him, this perspective is misleading from a very important question, and what is most needed “...is a sound set of judgment, some guiding principles, to make one’s own, balanced appraisals of both merits and demerits of technologies now in their infancy.” (Daniel Bell 2001: 15). Thus, the bedrock of Bell’s idea on technology underlies in the values that determine the kind of technology that is sustainable to the future of humankind and not vice versa.

Regarding change, Bell describes that in general, there are four sources of change in society: the first source of change is technology. He argues that technology opens many possibilities of mastering nature and transforming resources, time, and space, and, in many ways, technology imposes its own constraints and imperatives. The second source of change in his view represents the diffusion of existing goods and privileges in society, whether they are tangible goods or social claims on the community. The third kind of change, he states, involves structural developments in society that is the transformation of the economy into a “post-industrial” society which has shifted the weight of economy. on transformation from the product sector to services, and more importantly, the sources of innovation are becoming lodged in the intellectual institutions, principally the universities and research organizations, rather than in the older, industrial corporations (Bell 1973: 233).

For Bell, the consequences of such a change are enormous for the modes of access to place and privilege in the society in which the universities, the academia, becomes the “gatekeepers” of society. The universities, in his view, breeds “human capital,” rather than financial capital, and this raise crucial sociological questions about the relationship of the new technocratic models of decision-making to the political structures of society. The fourth source of change in Bell’s views is perhaps the most important one that is the relationship of the United States to the rest of the world (Bell 1972: 260-261).

DISCUSSION

Our preceding discussions on Daniel Bell’s ideas on future society through his theory of post-industrial society demonstrates a distinct methodological pattern – the evolutionist paradigm that deeply entrenched in Western sociological analysis influenced by Charles Darwin’s evolutionary stages of human progression. According to Frank Webster (2002: 34), this evolutionist thinking, usually ascribed as ‘Social Darwinism’, confers a rather haughty attitude among the scholars of the industrialized countries.

In his analysis on the theories of the information societies, Webster (2002: 34) concedes that there are two notions connected to this evolutionist paradigm; the first is *historicism* and the second is the *teleological* thinking. Within this paradigm, it suggests that the logical movement of history works in its deterministic way in which problems faced by the societies such as injustices, inequalities, poverty, racial divisions and so on will cease away and that the society will move towards a better and more desirable order. In contemporary terms, he claims that this evolutionist thinking has become identifiable trends of development in the direction of Western Europe, Japan and, especially, the United States.

This evolutionist paradigm (criticism within Western tradition on the evolutionist method comes from phenomenological study on human experience as conceived throughout history. Phenomenology finds new ways to the meaning of being human), specifically the method of historicity is strongly criticised by Karl Popper in his books, *The Poverty of Historicism* and *The Open Society and Its Enemies* as a deterministic understanding of historical development. Popper regards Marx’s view that history develops according to scientific laws

is one example of what he calls 'historicism.' He used the term to mean "...an approach to the social sciences which assumes that historical prediction is their principal aim, and which assumes that this aim is attainable by discovering the "rhythms" or the "patterns," the "laws" or the "trends" that underlie the evolution of history." (Popper 1974: 3). Popper's attack on historicism was based on what he termed as a 'method of generalization' that is deterministic, fatalistic and utopian – all that he regarded as the 'enemies to an open society.' (Ibid). In its Hegelian variant, historicism is best explained in his historical materialism in which the dialectical process of thesis, antithesis and synthesis interacts in human society and causes social change throughout their history in its continuity. But unlike this historicist claim of historical continuity, Bell argues for a discontinuity of history, in which the characteristics of the previous societies and their civilizations – the pre-industrial and industrial societies – are now under serious threat in the up surging of a new breed - the post-industrial society.

Underlies in both concepts is the magnanimous power of technology as the driving force of this disjuncture in human history that transforms the whole society or civilization from their traditional characteristics into a new kind unknown in any history. This outlook on future evidently demonstrated the technological deterministic analysis on future. Though quite different from Hegel's historical materialism and Marxist's socialist utopia, the post-industrial theory of human progress fall in the same fatalistic and deterministic nature of historical prediction as opposed by Popper. This post-Enlightenment liberal interpretation of the past and the future is found in Bell's application of the concept of future in his understanding and view on historical change. It is evident that the theory of the post-industrial society was developed in the framework of the positivist and liberalist outlook of history. Liberalism, projected onto the future in a peculiarly forceful way, reveals a rather optimistic vision of possibilities.

Bell's post-industrial society however, lacks the pluralistic features. Although he considers the possibilities of a non-Western or a religious post-industrial society in other socio-cultural settings, his view on the characteristics of his post-industrial society remain "western-centric" in which the prevailing and dominant cultural determinations will be founded only in the Western model, in fact, America as the archetype of an ultra-advanced

society. The overoptimistic tone on the continuation of the Western image of future determined by technological advancement was echoed in Bell, who was considered as representing the mainstream of the Western futurists' scholarship.

Combined with this optimistic view on future is the favorable attitude towards change that had transformed the relationship between past, present, and future. As we have pointed earlier, the pace of change and the revolutionary transformations they help to produce, had transformed the life of human society for the past few centuries. The modern Western history has been fascinated with the idea of change and its associations – development, growth and progress – all recapitulated in the evolutionist paradigm. Bell acknowledges the fact that the pace of change is the vital indicator of the society's movement towards progression. From this liberal orientation towards changes came the drive for reform - personal reform, social reform, even the reform of nature. In fact, both scholars view change as a requisite for any future reform be it social, political, economic or religious.

Our analysis on the thematical cores of the scholar's thoughts demonstrate that they are at least founded on two major bases: the first is the rationalization of knowledge and system and the second is technology and its relation to industrialism. All these two bases can be found both explicitly and implicitly in Bell's analysis on the present context that we are referring to, and in HIS discussions on future society. The first basis, the rationalization of knowledge and system, is the process in which systematic organization of knowledge and social structure gradually become apparent in a society. The rationalization process, as discussed by Max Weber in *The Protestant Ethics and the Spirit of Capitalism*, demonstrated how a religious precept, in this case, the Protestant asceticism had procreated capitalism. The Calvinistic quest for salvation security, Bryan S. Turner (1993: 115) says, gives rise by a process of unintended consequences to a culture that emphasized reason, stability, coherence, discipline and world-mastery.

Bell's schema of future society in the notion of the post-industrial term stresses information and knowledge as the determinant feature. It is this 'information society', Bell insists, that was a transition to a service economy, where most jobs were interpersonal and increasingly professionalised that marked the arrival of 'post-industrialism' (Daniel Bell 1973: 15). The 'information society',

for Bell (1973: 15), is the hallmark of the post-industrial society. As we have pointed in our preceding discussions, Bell (1973: 20) focuses on the growth of services, but he argues that much of the jobs of the future will go disproportionately to the highly educated, knowledge professionals, and this signals a major social transformation. According to Kevin Robins and Frank Webster (1999: 82), the strategic significance of information, namely theoretical knowledge, is presented by Bell as an 'axial principle' of his post-industrial society and as indicators of post-industrialism. They found that the interesting point in his analysis is the codification of theoretical knowledge and its centrality for innovation. This means that we have arrived at a situation in which it is possible to codify scientific principles, and consequently this becomes the starting point of action.

Robins and Webster (1999: 82) regards that Bell has taken the 'primacy of theoretical knowledge' further when he suggests that it is pre-eminent not only in the realm of technological innovation, but even in social and political affairs. The codification of theoretical knowledge that becomes the culture of the post-industrial society can be regarded as the result of advanced rationalization of knowledge in its quantification mode that produces scientific innovations. In other words, the rationalization process accelerates the pace of industrial society moving towards a post-industrial one and the central to the process is the theoretical knowledge. Bell seems to agree that developments in information and communications technologies will ensure a freer future for the 'information society'. This pure optimist view on the significance of information as intrinsically beneficial is, as we have demonstrated in the preceding section, a typical evolutionist-historicist evaluation of future. The underlying assumption is that greater flow of information and communication will result in increased knowledge, creativity and understanding among people.

If we are to revert to the power that results from knowledge/information, we can suppose that the new technologies of information extend and intensify the rationalization of control in social management and administration. In fact, as Kevin Robins and Frank Webster critically assert, control has become an integral part of social scientific management.

According to Robin and Webster, "...there are four related forces underpinning the system of information management and control. First, there are the institutions of active persuasion, such as propaganda agencies, public relations and advertising. Second, there are the various mechanisms of

secrecy, security and censorship, which try to restrict popular access to 'classified' categories of information. Third, there are the increasing developments towards the commodification and commercialisation of information, which subordinate the flow of information to business values and priorities (via market forces, patents, copyright, etc.). And finally, there is the proliferation of information gathering by corporate and political interests (opinion polls, market research, social surveys, but also more sinister forms of surveillance); it is this collection of 'increasingly detailed information about individuals and family units that not only threatens their privacy, but dramatically increases the power of those with access to the data to create and deliver specialized propaganda'. What we have, then, is an ever more intensive and extensive regulation of the information environment."

(Kevin Robins and Frank Webster, 1999, *Times of the Technoculture: From the Information Society to the Virtual Life*. London: Routledge, p: 236)

In this context, they argue that the process whereby authoritative control has become subsumed within the machinery of allocative control helps power to express itself through the discipline of calculative and rational social management and administration, and with the advancement of communication technology, the system's weakness has been minimized through the form of 'mechanization, automation, cybernetic direction' (Robins and Webster 1999: 234).

This rationalisation of control through bureaucracy, as with the rationalisation of knowledge through the increase in the codification of theoretical knowledge that promised true freedom by Bell in his future society seems to result in human confinement in a systematic social control through the disciplinary and calculative management of existence prevailing in their culture, way of life and social relations (Robins and Webster 1999: 94). Thus, for Robin and Webster, the illusion that brought by the notion of 'information society' as a free and democratic society is indirectly rejected by the 'management control' of the knowledge/information. A rather cynical interpretation of the 'managed society' puts forward by Richard Swift (1985: 7) when he says: "...management has become normal. It taps into all of us. We don't expect anything else. We are told what to do at work, what to buy at home and increasingly how to think. The modern world is too complicated. We can't imagine any other way for things to run." This social management and control that systematically imposed onto human agrees with Jacques Rancière's (1995: 6) description on the time of contemporary society as "...a homogeneous time...with the future being nothing but an expansion of the present". Perceiving this alternative view will thus enable us to see the consequences of his

gigantic ideas that attempt for a grand theory of human society.

The second basis of the thematically cores observed in the scholar's thoughts is technology. In Bell, technology is almost a determining factor that produces changes and transformations in the contemporary society moving to the post-industrial society. The codification of theoretical knowledge in the post-industrial or the information society produces scientific innovations in massive ways. This technological deterministic view on sociological analysis perceives no future than what Robins and Webster (1999: 74) termed as a 'techno-utopian' future where things become even more mechanized and automated, and the development of new technologies is allegedly set to bring about radical, but fortunately beneficent, social change. Within this paradigm, we can say that the future is no longer contains the possibility of unknown encounters and events that would be transformative and room for human creativity or autonomy. Frank Webster (2002: 236-237) views the otherness of the unknown future as the vital medium through which the process of creation and self-creation can become possible. Without the otherness, he claims, there can only be the closure of meaning. Bell's future in this case, gave the impression of only one type of future based on one sort of the present feature of human society – industrialism-capitalism.

In Western history, industrialism generally means two things: capitalist economy, and technological advancement. This then recapitulated in the notion of "modernism", whereas the process for achieving modernity is through development and progress. These words had become the magical elixir of the modern/industrial society and supposedly, in the post-industrial society as proposed by Bell. In Webster's words, "...technological enclosure of the future impounds the resource of open time that is necessary for the creative disorder of the radical imagination. We are left with nothing but the expansion of the present." (Frank Webster 2002: 236-237).

The image of the future society in Bell's imagination is a "practopian future" - to use Alvin Toffler's (1980, 1991) term - for industrialism and its twin children, capitalism (in the form of service economy) and technology (in which the mastery of theoretical/scientific knowledge is the requisite). The first basis as discussed earlier on the rationalization process of knowledge and system demonstrated that the unlimited expansion of rational mastery has become the basic criterion in producing

industrialism. According to Robins and Webster (1999: 139) , capitalism becomes "...a perpetual movement of supposedly rational, but essentially blind, self-reinstitution of society, through the unrestricted use of (pseudo-) rational means in view of a single (pseudo-) rational end. It has made the world a more closed and diminished space, a space of constriction and even incarceration."

Following this argument on the nature of capitalism and in its connection to the rationalization process, Robins and Webster perceive the logic of this order that the future must be colonized for it means the colonization of possibility and through technology, the master of the information society, the economy of the information society is sought to overcome the time barriers – hence the phrase, "the future is now" in the real-time economic-capitalistic paradigm. This has been clearly explained by Robins and Webster (1999: 234-235) as follow:

"The technologies of the new world information economy have sought to overcome the 'barriers' of time, putting in place the infrastructure for what is called the 'real-time' economy, and creating what Manuel Castells describes as the 'timeless time' of the network society. What this means is that global society is being subordinated to a rational and standardised temporality. The information society is obsessed with the future, but the future of its obsession is merely the endless continuation of the present."

The Western techno-culture has been fundamental to this industrialization project since the Enlightenment. Following the same lineal trend, this techno-culture of industrialization project will continue in the form of the post-industrial society, only in more sophisticated varieties thanks to the advance of technology. But underneath Bell's industrialization project is the context in which he speaks – the post-modernity context. This context, although a specific experience of Western tradition, its influence encompasses the Western boundaries, in fact the grand ideas behind it has entered global plane since many decades. Stoletov (2016:141) views transformation in the post-industrial society will affect social creativity that ensues further success not only in material but more importantly in symbolic form. However, Kristoffer Chelsom Vogt (2016: 369) argues that the post-industrial society theory has transformed from utopia into ideology, especially among the political elites of the United States. This view also shared by Marko Ampuja and Juha Koivisto (2014) who sees information society as serving "...hegemonic functions for political elites across the capitalist world, providing them with ideals and conceptions for forming politics

and political compromises in recent decades". <https://www.triple-c.at/index.php/tripleC/article/view/568/595>. Above all, the most critical impact of the post-industrial society onto world environment has yet to be managed despite growing concern over the crisis and to work on attaining sustainable development (Sergey Zhironkin 2017: 5).

CONCLUSION

In concluding our analyses on the thoughts of Daniel Bell, it is obvious that he derived his thoughts from modern Western tradition that values industrialism and scientism. The basis of his claim for the post-industrial society lies in these two main lines of modern socio-historical analysis within Western thoughts. This has greatly influenced his treatment and analysis on future society in the framework of Western futures thinking. This worldview and paradigm underlie the whole analysis of his approach and methodology, the contents of the discourse, and eventually his outlook of the future. Naturally, this is the bedrock of Bell's worldview.

The challenge therefore remains for the intellectual vacuum in conceptualization and reconceptualization of many significant issues pertaining to humanity and finding ethical and moral guidelines for alternative futures. This raises the significance of new religious and moral discussions and contributions in world affairs –and how ethical/moral/religious values could guide mankind in current context –the post-industrial or whatever. What Bell attempts at demonstrating is the emerging of this 'new context' –with different set of values and systems of operations. Postmodernity is a critique or reflection on modernity and its idealism - its failure and its predicament to humanity and the world at whole. But the critique is still continues on the same basis - the secular basis - which raises the question of its ability to offer alternatives to the current exhausting modernity and its ideals and systems. Or, could there be a different kind of secularity or modernity?

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