Development as a complex process of change: Conception and analysis of projects, programs and policies

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ABSTRACT

Development is often understood as a linear process of change towards Western modernity, a vision that is challenged by this paper, arguing that development efforts should rather be connected to the local stakeholders’ sense of their own development. Further, the paper contends that Complexity Theory is more effective than a linear theory of causality to analyze development and education efforts: hence, instead of studying the effects of separate development actions, the integrated factors leading to change should be considered. It is only after such analysis has been conducted, that questions of cost efficiency should be considered, using insights from the field of New Institutional Economics to avoid problems related to the stakeholders’ bounded rationality and asymmetric information leading to moral hazard.

1. Introduction

The purpose of this paper is to propose a set of tools that can help create and analyze the act of development as related to a project, program or policy for a specific community or area. The term development, despite its various definitions, can almost always be reduced to the idea of change, or to the intended process of change. It has been often defined – and criticized – as a project of modernization, focusing on economic growth as a path to development. Most practitioners and theorists have a standard vision of development, in which the notion of change (in the sense of development) is encapsulated in the Millennium Development Goals (MDGs). A successful program, in this view, would be cost-efficient and supporting the MDGs. Current development efforts are often looking at subject-specific targets in the MDGs, instead of considering poverty as a whole (Nordtveit, 2008). For example, many education projects target education goals within an Education For All (EFA) perspective,1 without integrating them into a larger poverty reduction perspective, although such integration may be more efficient to alleviate poverty.

This current paper recognizes a further problem connected to development efforts fixated on the MDGs, and its purpose is to examine the prevailing conception of development projects through questioning what Schumpeter (1994) termed the “pre-analytical cognitive act.” In this regard, the paper suggests that practitioners and theorists ought to repeatedly question the basics of the development process, every time a new project, policy or program is considered. First, instead of taking the MDGs for granted, it is necessary to constantly question the sense of development, and thereby to define the nature of the development change sought by a given population at a given time. Second, it is necessary to analyze how to achieve this change, and in particular, to determine the integrated actions necessary to overcome inertia and produce change. Third, it is necessary to question the cost-effectiveness of the project, program or policy backing up the process of change. This paper proposes that the first question is connected to cultural and philosophical understanding of development; the second to the processes of change in human societies; and the third to the economics of change. Hence, it may be useful to examine development processes using insights from a combination of theories, including Post-Development and Complexity Theories, as well as New Institutional Economics (NIE).2 In particular, NIE proposes tools that help analyze certain phenomena identified by Complexity Theory, such as inertia, or resistance of a given population to move towards what is commonly conceived as “development.” NIE is an economic perspective that focuses on the social and legal norms that underlie economic activity, whereas

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1 It should be noted that the EFA goals are integrated into the MDGs.
2 I have used this theoretical framework in the study of a literacy project in Senegal. For a fuller and expanded version of this argument, see Nordtveit (2009).
Complexity Theory proposes to study multifaceted networks of interactions to explain dynamics of change or lack thereof.\(^3\)

As noted above, development is often understood as a modernization project and as progress towards the realization of the Millennium Development Goals (MDGs). Hence, the reduction of the number of people living in absolute poverty, higher education attainment, more gender equity, etc., are considered as “development,” often without questioning to which extent this reasoning, and the supporting development policies and programs, are based on the view of the “modern west as a teaching civilization” to use a notion that has been critiqued by the historian Sachsenmaier (2006, p. 456). For Sachsenmaier, as in this paper, the term “Western” is understood as the dominant economies of the “developed” world, as opposed to the Global South, encompassing the so-called least developed and developing countries.

Development thinking has been much influenced by the insights gained from NIE, especially in terms of cost-effectiveness analysis. For example, the 2004 World Development Report (World Bank, 2003) made extensive use of NIE to examine how to make services work for poor people. NIE often considers the effectiveness of one development approach versus another. A cost-effectiveness analysis is likely to tell whether the return on investment (e.g., in adult literacy programs) is likely to be higher than investing in basic education or in some other educational program. It is often claimed that a strategy focusing on the actions that are most cost-effective in each sector provides the best solution towards achieving “development.” In other words, a usual entry point for analysis is the assumption that the combined effects of different development programs is the sum of the separate effects, and that development activities do not, to a significant degree, reinforce or cancel out each other in non-linear ways. It is also assumed that this entry point for analysis holds true at a macro-level (e.g., comparing agriculture, education and health), at a sector level (comparing non-formal education, primary, secondary and higher education) and at a micro-level (comparing various non-formal education initiatives). Very few evaluations or studies look at the integrated product of all development efforts and investigate whether and how, as a system, it leads to development; which are the factors of inertia (or resistance to change), and which integrated factors may lead to a process of change.

In this paper, it is contended that first the change desired by the stakeholders in the development process should be investigated, as well as the pre-analytical cognitive act predefining that this change is “good.” Second, with the use of Complexity Theory, the debate of the cost-effectiveness of a certain service as opposed to another should be pushed to a subordinate position and instead the wholeness and interrelation of development activities as a system in a given community or geographic area should be considered. Hence, this paper seeks to demonstrate that development, both at macro- and micro-levels, is a non-linear phenomenon that must be analyzed as such. It is further argued that development practitioners or theorists could use Complexity Theory as a tool for better understanding of processes of change in poor communities. Complexity and development could be brought together because human cultural settings and institutions as related to development efforts are complex and dynamic by nature. Individual human beings (local participants, donors, administrators, service provi-

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\(^3\) It may be argued that complexity has not yet been systematically articulated in such a way that it could be termed a theory (Kuhn, 2008). In this paper, I have used Complexity Theory as an umbrella term of scientific theories sharing the idea of non-linearity of complex social interactions, i.e., as noted by Byrne (1998), that outcomes in complex systems are determined by multiple causes, and that these causes interact in a non-additive fashion, because factors reinforce or cancel out each other in non-linear ways.
China, which has nevertheless left millions of poor people locked in extreme poverty. The decisive criteria of a development project would, in such a perspective, be related to social justice and not only be based on its perceived cost-effectiveness.

However, this paper argues that it is necessary to go beyond the critique of neoclassical economics and instead challenge the pre-analytic vision itself. This has been done by various intellectual movements, starting in the early 1960s as a reaction to the Western domination of development theory. In this regard, dependency theorists, for example, sought to “gain local control over the concepts and mechanisms of development” (Sachsenmaier, 2006, p. 457). These concepts and mechanisms are rarely neutral. Escobar, building on Illich and on Foucault, demonstrated that Western economies impose external norms and values on countries of the Global South – and “construct” them as least developed or developing. This imposition is made possible by the use of what Foucault termed “discourse,” or language in its relation to social institutions and systems of power: “Discourse is not the expression of thought; it is a practice, with conditions, rules, and historical transformations” (Escobar, 1995, p. 216). Adapting a Western discourse of development, then, naturally brings about a predefined vision of lacking development in the South, and the corresponding Western-inspired fix.

Further, the vocabulary of development frequently uses negative and possibly disempowering terms to characterize development target, such as Least Developed Countries (LDC), ethnic minorities, orphans and vulnerable children (OVC), Inter-generational Transmission of Poverty and Illiteracy (ITP and ITI), and AIDS villages. These are all expressions that to a certain degree may construct a negative perception and self-image of the “beneficiaries,” and at the same time, reduce people’s situation to a short diagnosis, often made by reference to technical acronyms that are only known and used by specialists. Likewise, in the field of education and development, illiteracy is often compared to a disease – and education is the cure. For many development agencies, Western-inspired and theoretical education systems are depicted as the cure for various illnesses of “under-development,” and, similarly to a miraculous medicine, solves health and hygiene problems, increases the household’s income, and combats the spreading of HIV/AIDS. Illich already in 1971 claimed that development programs often correspond to standardized solutions and “services which have been designed for an affluent culture” and which “can never satisfy majority needs” (p. 97). In the field of education, this may lead to confusion between education and school attendance, in which the curriculum does not fit the needs of the majority of the students. Hence, education programs that emphasize theoretical “urban” knowledge can ultimately do a disservice for students, by inciting a rural exodus, thereby eventually leading to unemployment and frustration.

The criticism of the disempowering discourse of the development institutions is partly originating from postmodern intellectual streams, especially postcolonial and Post-Development Theories. Many postcolonial thinkers challenged the concept of Western modernity as a discursive instrument that could be used to further Western interests (Sachsenmaier, 2006). Likewise, Post-Development Theorists criticized development practices and discourse as a Western-imposed “planned poverty” to use the title of a notorious 1971 paper by Illich. Other intellectual movements, such as dependency theory, claimed that the mere presence of the West makes it impossible for other societies to follow their own historical path, while “the liberal market economy and not its absence was the root cause for the economic misery and social crises in most countries” (Sachsenmaier, 2006, p. 457). Hence, development programs were identified with “package deals” corresponding to Western pre-analytic vision.

We have embodied our world-view in our institutions and are now their prisoners. Factories, newsmedia, hospitals, governments and schools produce goods and services packaged to contain our view of the world. We – the rich – conceive of progress as the expansion of these establishments (Illich, 1971, p. 95).

Because of this imposition of external norms on the South, Escobar (and other Post-Development intellectuals) rejects the development discourse, and instead proposes to search for alternatives. In particular, he claims that Southern grassroots movements could develop a new discourse that will replace Western development strategies, and that the search for a new paradigm should start at this level (Escobar, 1995).

A number of theorists have challenged Escobar’s critique, and argue that few development initiatives are based on top-down imposed Western norms and ideas. Instead, it is claimed that development projects frequently are grounded in non-governmental and community-based organizations and search to promote local culture, institutions and norms (Willis, 2005). Others claim that poverty is rooted in a more complex set of problems, including,

…a bewildering array of factors that include the structures of the global economy, but also encompass ideologies and mentalities as well as more local factors such as corruption and the compliance of many social groups to colonial rule (Sachsenmaier, 2006, p. 457).

This current paper argues that in each development initiative, the discourse should be analyzed to ensure that it is grounded in the local community’s context and desires, and that it does not consist of a pre-packaged top-down imposed Western initiative. Likewise, the pre-analytic vision of the development initiative should be questioned, as a first priority. Particularly, it is important to question the fundamental beliefs grounding the analysis – and establish how they relate to the local communities’ beliefs, value system(s), culture and institutions. Then the desired nature of the development initiative should be questioned; and it should be established who it empowers. Instead of proposing development “solutions” that may disempower certain members of the community, the aim of such analysis would be to define development goals that are grounded in a real community ownership (not only in a consultation with the community) and in local needs as defined by local stakeholders. Here, it is necessary to underline the importance of defining “community.” All too often projects and policies use the term to indicate that some participatory action has taken place, whereas in reality, the “community” consulted consisted in a number of male community leaders. In defining appropriate development goals for a community, it is of course necessary to question which part of the community should be involved and thereby empowered – and if the development action and discourse may disempower any specific group of community members. When a set of development goals has been defined, the next step would be to establish how to obtain the desired change.

3. Development and complexity

A second set of questions a development practitioner or theorist ought to ask, it is argued, should be based on the development goals defined previously. Now, it is time to define the holistic systems of action that will contribute to this change:

- What are the causes for inertia in the community?
- Which combined actions are necessary to achieve a critical mass leading to change?
Weber’s model of causal analysis has often been used as a reference point to explain historic change. In his framework, a hypothetical sequence of events from an initial state A to an eventual result B is imagined (Ringer, 2006). Then – a change (such as a development project) in the initial state A is established, resulting in a different path, A1 to B1. Ringer depicts the relationships between cause and effect (drawing on Weber’s methodology) as a linear relation of A to B and of A1 to B1. In development, theorists and practitioners have often looked at cause and effect as linear relationships. When the development outcomes were difficult to predict and did not lead to the expected change, the results were often associated with the bounded rationality of the development target. Therefore, development failures could be used as a strategy to displace blame onto the poor and reinforce social myths about the local stakeholders’ control of their own fate. Also, it could lead to person-centered actions, rather than questioning and analysis of local and global institutions and systems.

A possible problem with such analysis of development efforts is its focus on the efficiency of the delivery of a single product, A1 and B1 – and lack thereof, A and B. It does not consider the society (and stakeholders) as non-linear systems of inertia and change. Complexity Theory may be a better fit for analysis of development actions, since it does not isolate event A1 causing B1, but looks at the holistic systems where development event A1 would have different outcomes (B1, B2, B3, etc.) depending on the co-interacting factors with A1. The basic premises of Complexity Theory is that a system needs to reach a critical mass to overcome inertia of the status quo, and to reach a “sustainable autocatalytic state – that is, for it to maintain its own momentum in a particular direction” (Mason, 2009, p. 118). Once this critical mass is reached, new properties and behaviors emerge that are not necessarily contained in the system’s constituent elements:

Once a system reaches a certain critical level of complexity, otherwise known as the critical mass, a phase transition takes place, which makes possible the emergence of new properties and behaviors and a new direction of self-sustaining momentum (Mason, 2009, p. 120).

In order to reach the critical mass for change, the interactions between factors causing change are important. If a development effort (project, policy, program) is failing, it may be that it has not reached a sufficient level of interactions (or complexity) necessary to attain a critical mass for change. As a thought experiment, let us imagine the interactions around a literacy project.4 Most proponents of literacy education would argue that providing literacy for literacy’s own sake is not likely to be successful. It is in the interaction with other development efforts that literacy can produce a literate and enabling environment, prone to the dynamics of change. In Complexity Theory, each additional factor (for change) added to the system multiplies exponentially the number of interactions between agents, and therefore multiplies exponentially the number of possible outcomes (Mason, 2008). Hence, literacy alone does not interact with anything if it exists in isolation – which may be the case in communities where there is no usage for reading and writing. In our thought experiment, if one activity (or agent) is added to the literacy project, say the provision of newspapers in the community, one connection is made, literacy–newspapers. If an additional element is added, say the provision of novels, there are three connections: literacy–newspapers, newspapers–novels, and literacy–novels. This thought experiment is very simple, but it is easy to recognize that a project will have a better chance in implementing a successful literacy course when it is integrated than when it is operating in a void. If an extra element is added, the number of possible interactions are six; another one will raise the number of interactions to 10, another one, to 15; another one, to 21, etc. In other words, the system evolves in a non-linear fashion:

- One activity: no connections;
- Two activities: one connection;
- Three activities: three connections;
- Four activities: six connections;
- Six activities: 15 connections;
- …
- 10 activities: 45 connections;
- 100 activities: 4950 connections.

Of course, no development system acts in isolation in the way we constructed our thought experiment: we have to add in factors of culture, society, ethnicity, religion, political belonging, which each interact in a non-additive fashion, some reinforcing and some reducing the effect of the initial development agent, literacy. Complexity Theory demonstrates that the combined effect of these interactions is not necessarily the sum of the separate effects, but that it may be greater or less, because the interactions reinforce or weaken each other. Also, they may not act the same way in each system. In other words, the introduction of an element such as newspapers or novels may have a positive effect in some communities (i.e., contributing to reach a critical mass for literacy acquisition by the participants), or may have no effect in other places. In some situations, it may even be counterproductive, and lead to negative effects, including corruption, resentment against distribution or sale of specific types of the literature, or disregard for written text. Hence, the way a factor will interact with others depends largely on the initial condition of the system.

Complexity Theory therefore emphasizes the need of understanding each actor’s motivation and bounded rationality: a small change in the initial conditions of a system may exert great influence on the subsequent behavior of each added factor of change. The bounded rationality of each actor (including development agents) can be better perceived and understood when a level of social embeddedness is understood (i.e., values, norms). We have looked at a simple example of literacy above, but the same type of argument holds true for the greater picture of development. Not only are the interacting factors non-linear, but also they are often dialectical. Hence, it may be argued that:

- Health efforts are influenced by literacy, and in turn, the health of the participants influences literacy acquisition.
- Agriculture is influenced by literacy, and literacy acquisition is likely to be influenced by the type and level of agriculture of the participants.
- Cultural values are influenced by literacy and literacy acquisition is influenced by the cultural values of the learners.
- Etc.

These dialectical interactions depend on the locality and the initial conditions of the system. In development projects, it may be necessary to add as many “positive” interactions (i.e., interactions that are desired and owned by the community) as possible to the

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4 See Nordtveit (2009) for an application of this analysis to a literacy project in Senegal.5

5 The mathematical formula is \( y_n = \frac{1}{2}(n^2 - n) \), where \( y(n) \) is the number of possible connections associated with a given number of elements or agents \( n \) (Mason, 2008).
system to attain a lock-in for sustainable autocatalytic change and overcome an initial condition of inertia (Mason, 2009). It is also necessary to understand the initial condition of each system in each locality, since the agents for change do not interact in the same way; the bounded rationality of each actor is not the same, and the possible outcomes of each added factor are therefore variable according to the initial circumstances.

Research in Complexity Theory has identified a number of qualities that are habitually manifested in complex phenomena. First, a system (or more often, systems) emerges through the self-organization of various interacting elements. Such a system or structure can of course be negative or positive. In development projects, the self-organization can vary from corruption to positive change in the community. For example, an education project can lead to a self-organized system of rural exodus—or to improved livelihoods in the community. Here, we see the importance of the initial set of development questions—asking, along Illich’s (1971) terms, whether the education or literacy project is a part of a community-defined and desired option, or a top-down imposed and pre-packaged solution that would ultimately lead to rural exodus and unemployment in urban areas. Also, such self-organized systems can be bottom-up emergent: it does not depend on a specific organization or an over-arching super-structure, although it can be part of such structure. To continue our example above, the community participants themselves will decide whether or not the education project will lead to a better community life or to rural exodus: this is generally not decided by the service provider or by the government. Likewise, the system does not depend on centralized control, but on short-range relationships among actors. For example, in an education project, the systematic, self-organized and non-formal relationships between the community members, the local service provider, local administration and the community participants will usually be stronger than the over-arching, top-down administrative structure of the project.

Also, complex systems are often nested one within the other, i.e., a development project has various levels and types of coordination, field activities, learning and interactions. Many of these activities in themselves constitute complex systems. In the example above, we saw that education efforts (which are complex networks of interactions among actors and activities) can be influenced by health (another complex network). Then again, the health of the participants is likely to affect education and literacy acquisition: a dialectical relationship that is likely to promote lock-in to a positive feedback loop. These systems are ambiguously bonded, i.e., it is impossible to define the boundaries of each complex system. In the example above, it would be difficult to determine the boundaries of each system, such as education, health, agriculture, culture, religion, etc. Also, the systems are constantly evolving—they are learning and “thus better described in terms of Darwinian evolution than Newtonian mechanics” (Davis and Sumara, 2006, p. 6). This implies that they are not in equilibrium, but likely to change over time, since their dynamics are constantly evolving.

Development programs are usually set up and implemented in a non-integrated way, and thus each activity reaches the participants as a single product (Nordtveit, 2008). Such non-integration may reduce the effect of interaction between the agents that are supposed to lead to change, and may prevent an intergenerational condition of poverty to reach a critical mass of change in the sense of development (in whatever way the terms “poverty” and “development” are understood). In using the aforementioned example, education efforts act alone to obtain literacy, health efforts act alone to reach health, and these efforts are rarely integrated, thereby ruling out the complex interaction needed to achieve the necessary momentum of development change. Thus the education project (or any other project), although possessing all the characteristics of a complex system (it is a complex system), may be locked in to inertia, because the health of the learners, the cultural incentives to learn, and all the other complex relationships that need to be explored and exploited are not included or facilitated in the initial set-up of the project, policy or program. In the cases where non-integrated development projects have been successful, the success may largely be due to complex, bottom-up emergent self-organization of the actors and their integration of the project into a larger system of local interactions and realities. This paper contends that development projects, programs and policies could facilitate such interactions to obtain better results.

Many development initiatives bypass the questions developed in the two first sections of this paper (related to the pre-analytic vision of development, and the study of the complexity of change) and instead turn to the question of the cost-effectiveness of a pre-packaged solution to a Western-defined “deficiency” in a given community. The cost-effectiveness of one action is then compared to the cost-effectiveness of another, and the most cost-effective will be implemented, regardless of whether it corresponds to the participants’ vision of their own development, or whether this particular action will be the most cost-effective solution in a complex social system of change and development. This paper argues that it is only when the first two first set of questions have been fully explored, that one should turn to the questions of efficient implementation strategies and cost-effectiveness.

4. Effective implementation

Finally, it is argued that a third set of questions a development practitioner or theorist ought to ask are related to the practical implementation and processes of the development project, program or policy:

- Which set of actions would be the most cost-effective?
- How to minimize transaction costs and at the same time avoid problems of asymmetric information and moral hazard?
- How does the bounded rationality of each stakeholder impact the development initiative?

Obviously, several frameworks can be adopted for social and economic analysis for the implementation of development projects. Williamson’s (2000) distinction of four different levels of analysis may be useful, since the analysis is decomposed into topics that are each representing a various pace or frequency of change or “development” (see Fig. 1).

A first level, which Williamson calls “social embeddedness,” encompasses norms, culture and religion. This level has already been partly discussed in the first section, because it includes the pre-analytic vision of development (and change). Embedded values in society are slow to change, and will sometimes last for decennia. Economic analysis has habitually ignored this level, although development target and activities may be different if the participants’ bounded rationality is understood within the embedded values of their concerned society.

A second level consists of the institutional environment, where the term “institutional” is understood as a set of formal or informal
rules of the society. This level encompasses propriety rights and ownership, marriage, as well as the market and the state systems. Change at this level occurs more frequently, and can be measured in decades. A third level consists of the enforcement arrangements of the formal or informal rules, or governance. Activities can be decomposed into principles of conflict, mutuality and order – where governance acts as an effort to guarantee order and “thereby to mitigate conflict and realize mutual gains” (Williamson, 2000, p. 599). A fourth level encompasses resource allocation and employment effectiveness. Change at this level is continuous.

According to Williamson (2000), neoclassical economics has been preoccupied with change at the fourth level, concentrating on resource allocation and employment, whereas New Institutional Economics (NIE) has been analyzing levels two and three. Development projects have often focused at getting good governance structures and thereby to maximize resource allocation and employment effectiveness. Some projects have concentrated only on the forth level of analysis, to get resource allocation and employment right through reliance on institutions that are considered as effective, such as the market. This development approach, built on a version of Reagan and Thatcher's conservative agenda, was based on the standard market model, a core element of neoclassical economic theory (Todaro and Smith, 2003). Currently, although many of the more conservative development practices have been discontinued (especially the structural adjustment programs that intended to reduce the size of the government and at the same time to liberalize markets), many of the basic principles, such as liberalization and privatization, are still seen as vital to promote economic growth.

In order to improve the institutions and governance structures, NIE proposes several analytical tools. First, it is recognized that there are costs to run an economic or social system. These costs could be related to the set-up of institutional arrangements (also called fixed transaction costs) or they could be variable transaction costs, including research and information costs, supervisory, monitoring, evaluation, and enforcement costs (Furubotn and Richter, 2003). These variable transaction costs can be particularly heavy when privatizing social services, because of the costs of ensuring contract compliance. Hence, in situations where development policies based on the neoclassical market model would argue for the privatization of social services, NIE might in certain cases show that such delivery system would not be cost-effective because of its high transaction costs. The field of NIE also deals with such issues as decentralization and corruption. Within this framework, for example, there is no certainty that using community-based associations or non-governmental organizations (NGOs) to implement services will reduce corruption or enhance effectiveness: “It is often stated that privatization or “NGOization” would reduce corruption but this is seldom rigorously evaluated. Private providers and NGOs can also siphon off or waste funds and perform poorly in terms of service delivery” (Azfar and Zinnes, 2003, p. 16).

Further, according to NIE, the issue of bounded rationality is a main problem with development projects. Bounded rationality relates to situations where people do not take the action that would maximize results (from an economic point of view), because they do not have complete access to information of what is feasible – or they have priorities that would be considered as non-rational from a Western point of view. Also, actors in a development program (donor agencies, civil servants, service providers, local participants) have a limited ability to store and utilize information; and the use of information of each actor may be changed by their embedded values, including cultural practices and religious beliefs, or institutions, governance, or again personal preferences (Furubotn and Richter, 2003). Such problems may lead to decisions that prevent an optimal outcome of the development project.

NIE recognizes three circumstances that may make people act in the interest of others. First, people may make the effort to help others out of love, solidarity, or other variants of altruism. Alternatively, they may be coerced to help others by the threat of use of force. Finally, they may act out of their own free will, but “are motivated out of enlightened self-interest because they can expect a sufficient reward. What they do for others is then the side-effect of their selfishness” (Kasper and Streit, 1998, p. 61). NIE contends that the last type of motivation works best in larger societies, and in most development situations. However, the use of selfish motivation together with bounded rationality may lead to development actors’ evaluation and choice of the development project and implementation type that are likely to maximize his or her reward, based on his or her flawed information and limited cognition. The ability of understanding the actors’ behavior is therefore a prerequisite to develop efficient development projects. Each actor’s behavior may be linked to the perceived cultural and religious rewards of the behavior, or to its cash value. In designing development programs, one must therefore not only understand the possible economic gain of an action, but also strive to obtain a deeper understanding of each actor’s motivation, i.e., not only connected to a level three and level two analysis as depicted in the model above, but also seek to understand underlying embedded social values.

A supplementary hindrance for developmental change is the principal-agent problem, which arises when agents, such as service providers, act on behalf of principals, such as public institutions, and when the agents have better knowledge about the operation than the principals. In such cases of asymmetric information, it is likely that agents act in their own interests and induce shrinking and other opportunistic types of behavior (Furubotn and Richter, 2003). The word “moral hazard” is used to describe situations “where self interested individuals are tempted to violate general standards of honesty and reliability, and circumstances allow them to get away with it” (Kasper and Streit, 1998, p. 67). Moral hazard is a common problem in development projects, since many agents act out of self-interest. The state or funding agency therefore has to set up costly control procedures to correct the problem of asymmetric information. The issue of control and information leads to questions about the regulatory function of the state: is the state capable of regulating implementation of the development project or should another controlling mechanism be set up, such as an independent grassroots organization or other?

The questions above demonstrate the necessity to perform the development-related (pre- analytic) and complexity-related analysis before dealing with implementation modalities. Control and information procedures may be community-based (and the transaction costs correspondingly lower) if the project is commu-
nity-owned, rather than a pre-packaged solution implemented in a top-down manner. Moreover, holistic and complex project structures could promote sustainable autocatalytic change at the community level and enable community and participant control instead of costly tiers-party monitoring mechanisms.

5. Conclusion

Development practitioners have at times been criticized for the implementation of pre-established and pre-packaged solutions, and non-integrated activities, to score against subject-specific indicators. For example, an education program will be set up because of a pre-analytic vision defining education as a good thing; it will seek to eradicate illiteracy and maximize educational attainment, and will be evaluated for its scores in this regard. It will rarely be seen as a necessary component in an agriculture or health project, or be evaluated for its impact on the outcome of such projects. The communities’ use and need of literacy or education will rarely be evaluated, neither will the effects of the discourse be deemed as worthy of interest – i.e., to which extent various community “beneficiaries” who are now characterized as vulnerable, uneducated and illiterate, will be empowered or disempowered by this labeling. This paper suggests that a more useful way of looking at the effects of an education program (or of any other development initiative) would be to evaluate its contribution to the larger development context using multiple layers of analytic strategies. A planned or implemented development activity could therefore be submitted to three stages of analysis: first one should question the underlying (pre-analytic) development values, project ownership and discourse. Then an analysis of the combined (complex) efforts necessary for development change should take place. Finally a social and economic analysis of the internal efficiency of the development activities must be carried out, establishing the transaction costs, the access to information and the rationality of participants within their community-specific socio-cultural context (see Fig. 2 below for an illustration of the suggested analytic structure for a development policy, program or project).

Development efforts have frequently been criticized by the mass media for their low impact. Various types of economic and social analysis have attempted to improve the effectiveness of each separate program. Increasingly, community-based associations, NGOs and other development organizations have started to look at the interconnection between development efforts, and have started to propose more integrated activities. This paper contends that the internal effectiveness of each project (or activity) can be improved through a NIE analysis of separate efforts, but that the overall effectiveness of development efforts is dependent on the integrated effort of many development activities within the same society. Therefore, instead of “thinning out” activities by proposing one service to each community, it is necessary to integrate the development activities. How can this be achieved in a context of donor fatigue and scare resources? In an analysis of Complexity Theory and education, Mason (2009) proposes to start with the poorest schools. A similar approach may be followed in development efforts: start with the poorest communities. Such approach may mean that certain Millennium Development Goals (MDGs) would not be reached. However, it is also possible that the MDGs’ predefined standards and solutions are not always adequate to define the needs of a community. The MDGs, to some extent a Western-steered exercise, imposed a specific set of values on Southern countries. Also, instead of integrating development activities in one single approach, each initiative is operating alone. For example, to reach education goals, many projects provide pre-packaged mass education programs, which in view of lacking financing are inadequate to create a sufficient critical mass for change-development, let alone reach a sufficient literacy level after primary schooling. Whether the pre-packaged development solution really leads to “development” or whether it brings about some undesirable effect, such as rural exodus and disempowering of local communities, has often not even been investigated.

Instead of blindly following MDG solutions, the contribution of Post-Development and Complexity Theory, as well as New Institutional Economics, could lead to a set of new priorities in development practices, which can be resumed as follows:

(i) A community-owned approach
- Start the development initiative with a questioning of the pre-analytic vision of all actors involved. Investigate questions of ownership, power and discourse.
- Research the initial condition of the system (e.g., participants and community); create programs that understand and to the extent possible, build on, the norms, religion, and culture of the participants.
- Create projects that involve and transfer ownership to the target communities and grassroots movements already during the design phase.

(ii) A complex approach
- Integrate service delivery as much as possible to create a sufficient complexity to enable development (change) in target communities.
- Evaluate the initiative as a holistic system and not as a separate effort towards a specific MDG goal.
- Create flexible initiatives that can easily be modified to the ever-evolving and unique circumstances of each participant and target community.

(iii) A cost-effective approach
- Address both market and government failure, and in particular, problems of provider monopolies, asymmetric information and moral hazard.
- Address the bounded rationality of the actors.
- Minimize transaction costs, but keep an effective monitoring and evaluation system (if possible by local participants) to ensure contract compliance.

This paper has proposed a set of tools to create and analyze development activities. It is not contended that this toolbox is in any way complete. However, the paper proposes a different way of questioning and analyzing development – which has as its aim to empower the community stakeholders and at the same time to improve the effectiveness of the development process.

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8 Based on Nordtveit, 2009.

9 For an exploration of possible integration of literacy, health and early childhood care programs, see Nordtveit (2008).
References


