

# **A Middle-Out Approach to Agency, Capacity and Societal Change**

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### **Abstract:**

Agency and capacity are essential resources for initiating and maintaining technological and social changes, let alone a transformation. Therefore, who has the capacity and where the agency lies are important questions when trying to encourage societal changes, such as a low carbon society. Theoretically, greater overlap between these two variables increases the potential for a durable change.

Our paper uses a middle-out perspective to investigate agency and capacity issues in the transformation to a low carbon society. 'Middle-out' is a complementary and sometimes alternative approach to 'bottom-up' and 'top-down' efforts to drive low carbon innovations and practices in society. It goes somewhat beyond the traditional wisdom which views social and technological innovations as either being induced from the top-down or evolving from the bottom-up. Instead, the middle-out perspective identifies agents of change, as well as agency and capacity roles, which are located in the middle, in between the top and the bottom.

In this paper we concentrate on different 'middles' vis-a-vis tops and bottoms, and explore their potential to encourage societal change. Through three case studies we emphasize on the qualities of the middle as enabler, aggregator and mediator. We examine building professionals, aggregation within commercial organizations, and faith based communities.

## 1. Introduction

The need to move to a low carbon society and low carbon economy is being put forward in international, national and local forums. This implies a fundamental and systemic change to the technologies and practices of the existing energy supply and demand systems. Two essential elements for successful transition are agency and capacity. The term ‘agency’ in sociology refers to actors’ capabilities to act independently and to make their own free choices. The term ‘capacity’ refers to their capability to perform the choices they make. Theoretically, agents of change with greater overlap between these two variables have the potential to lead a durable change. However, some of these agents of change are often being overlooked by policy makers as the latter tend to concentrate either on the big actors which have the capacity to make the change but lack agency, or the millions of energy consumers, which have the agency to make the change but often lack the capacity to exercise it.

Often, energy systems are being simplistically divided to suppliers and consumers. In practice, and in relation to transition, this means that suppliers are being heavily regulated while small end users are being much less regulated and mostly encouraged (economically and morally) to change their energy- and carbon emissions-related behaviour. Additional prevailing dichotomy is of technological innovations and their implementation by users. In this case, much attention (and stakes) is given to the development of new technologies, while there is an assumption that once the technology exists and given the right financial incentive, it will be adopted by all instantly. There seems to be two underlying assumptions underpinning these dichotomies: first, that the systemic change will be initiated and driven from the top-down and from the bottom-up; and second, that the tops and the bottoms – suppliers / consumers and technology / implementation - meet at some point in the middle. This middle is seen merely as ‘filler’ between the two levels. Accordingly, the institutional structures and procedures set by policies and practices often follow these assumptions, emphasizing on the edges and overlooking the ‘middle’ (or the middles, as we will soon explain).

In this paper we concentrate on the middle. We use the middle-out rationale to recognize important middles, and middle-agents, which are (or could be) relevant energy system and discuss their agencies and capacities; the impact they may have on the different ‘outs’; and their enabling and supporting roles in the transition process to a low carbon society. This paper builds on Parag and Janda (2010) conceptualization of the middle in energy systems and the middle-out approach for systemic change. Parag and Janda had discussed in greater details the characteristics of bottom-up and the top-down approaches to energy transition. They argued that the middle is more than ‘filler’; rather, it has many qualities and functions which are essential to a systemic transition. They have suggested that often the middle agents have both the agency and the capacity to make and support the changes, and concluded that it is worth thinking of adding to the top-down and the bottom-up approaches a middle-out one.

The paper gives a short introduction to the middle-out approach in the context of energy. In the centre of this paper are three case studies of different types of middles: building professions and professionals; aggregation of units within organizations; and faith based communities.

Professions and practices such as builders, constructors and architects are neither top nor bottom, and neither suppliers nor consumers. They could be considered as middle agents because in many ways they shape the practices through which energy is delivered and used by consumers in buildings. In our context, their actions have an impact on the capacities of energy users in buildings to reduce emissions. Buildings professions and professionals have enabling and mediations functions which connect the top and the bottom in a meaningful ways. Because of their middle position they can communicate needs and constrains to the top (upwards), to consumers (downwards), and to similar institutions and practices (sideways).

Another middle we discuss here is the one created by aggregating a number of smaller similar units within a larger existing organization, such as a franchise of small businesses (e.g., convenience stores) or properties within a commercial real estate portfolio. This aggregation lies between energy suppliers and parent companies at the top, i.e. big, bureaucratic, structured and rational organizations, and numerous units (bottom) which are affiliated economically and organizationally with the parent company but whose energy profiles are normally considered separately and independently. Separately, these units are less structured, not as bureaucratic, often lack energy knowledge and energy awareness and cannot invest the time and resources to learn it. In this instance we emphasize on the empowerment of organisational agency and capacity to reduce emissions.

The third middle we discuss are faith based communities. Those middle agents already have an established function in society and they play meaningful role in their communities. Faith congregations have established structure, as well as established communications routes, moral legitimacy and some authority. They have a huge influence over the perception of self agency, and are organized and have the resources to create the capacities needed to make some of the changes. These qualities are important to initiate and support transition.

## 2. Background

### 2.1. On Middles, Agency and Capacity

Parag and Janda (2010) argue that middle agents are well situated to make change, particularly in terms of agency and capacity. The term ‘agency’ in sociology refers to individuals’ capabilities to act independently and to make their own free choices. The term ‘structure’ on the other hand, refers to factors that shape or limits individuals opportunities, and include for example social class, religion, gender and ethnicity (Barker 2005). For many years ‘agency’ and ‘structure’ were seen as alternative explanations to behavior. The ‘structuralists’ explained agency of individuals mostly by the operation of the structure (e.g. Marxism); while the opponent stressed the capacity of individual "agents" to construct and reconstruct their worlds. An alternative integrative option was adopted by modern social theorists (Berger & Luckmann 1966; Bourdieu 1977, 1990). They have pointed at the balance between the two previous positions: structure and agency are complementary forces. Structure influences human behavior, and humans are capable of changing the social structures they inhabit.

Most individuals have some level of agency over their behavior but this agency is influenced and shaped by social norms, social order and established practices, i.e. structure. An effective behavioral change would happen when individuals have the capacity to change their behavior and when the ‘structural’ elements support this change. In some aspect of life, the social norms, order and practices are delivered to individual via different communities, organizations and networks the individual is attached to, affiliated with or embedded in.

These mediating entities often can harness greater resources and capacities to make changes, compared to individuals. Figure 1 shows a graphical representation of this idea.

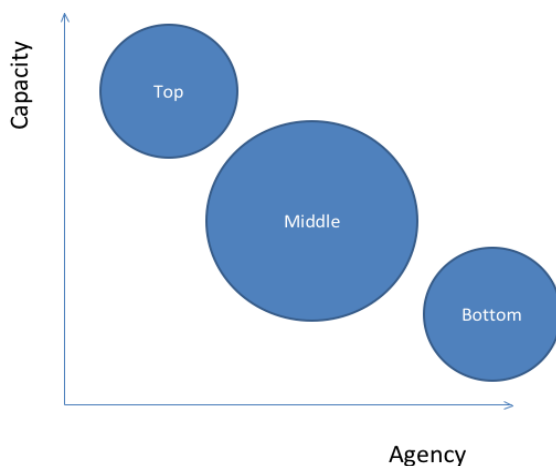


Figure 1. Agency and Capacity (from Parag and Janda 2010).

Obviously, not all middle agents enjoy greater capacity and agency. Some of them could be weak on both elements, and the challenge is to recognize the right agents to the specific task.

## 2.2. Middle-out strategy

Middle-out is not necessarily an alternative to the top-down or bottom-up but rather an additional, supportive, and maybe more effective way of delivering change. The middle-out could be used as a strategy to initiate change, propose ideas, and innovate. Ideas coming from the middle could be better tailored to downstream needs, better communicated upstream, more acceptable by both up and down stream, and with a potential to have an impact on sideways too (i.e. similar organizations; other middle agents). As an agent, the middle might be more trusted, have established and accepted information channels, serving to mediate between the top and the bottom. Hence the middle can be harnessed to increase public support for changes. And as mentioned above, the middle also might have greater agency than the top and bottom to actually implement changes.

Table 1 summarises some of the differences between a middle-out approach and the more traditional top-down and bottom-up approaches to carbon reductions.

Table 1: Approaches to energy and climate change policies (From Parag and Janda 2010)

Carbon reductions via	Top-down	<b>Middle-out</b>	Bottom-up
Low carbon society	Supply of low carbon facilities and low carbon alternatives	<b>Introduction of Norms; tailored supply of needs</b>	Introduction of norms and behavior
Low carbon homes	Regulations	<b>Professionals and practices</b>	Demand from individuals
Low carbon energy sources	Utilities	<b>Community ownership</b>	Individual ownership
Agent and agency	Government	<b>Communities</b>	Individuals, grassroots

## 2.3. The middle in energy studies

The middle in energy studies might be conceptualized in several different ways. Physically, it could be the interface of supply and demand, which could include the transmission and distribution systems. Other “middles” in the energy demand field include the role of supply chains (Guy & Shove 2000), property agents (Schiellerup & Gwilliam 2009), builders (Killip 2008), and architects and engineers (Janda 1998a). From a social perspective in the residential sector, Parag and Darby (2009) argue that in the area of energy demand there are three main groups of actors that play essential roles: central government, energy suppliers, and energy users. They introduce a “demand reduction triangle” to help discuss the relationships between these groups, arguing that a careful analysis of the interrelationships of the dyads shows a number of missing linkages. In this framework, energy suppliers are both in between government and energy users, but interestingly, they are also to one side. Parag and Darby argue that although

government tries to place energy suppliers in the middle, suppliers fail to connect successfully with consumers on issues of carbon reduction. In effect, suppliers are essentially a kind of “failed” middle, suffering from principal-agent problems, and their interests towards emissions reduction do not align with consumers’ interests.

Energy systems present particular challenges for policy and governance as they tend to reflect long-term historical forces and crisis events, and tend to lead to lock-in rather than change (Unruh 2000). Transforming energy systems to incorporate high renewable energy content requires coordinated effort and changes amongst numerous actors and institutions (Smith 2007). Coordinated effort is also needed to transform energy consumption sectors to lower energy demand. As such, the significant changes expected in the UK energy system require an analysis of the networks and the relative bargaining power of the actors within them that determine policy outcomes. However, the scaling up of activities to a systemic change requires broader (and deeper) social transformation processes. We suggest that a middle-out approach could assist in this process.

Nonetheless, identifying middle agents and empower them to use middle-out strategy could be problematic in some cases. For example, often the middle actor has its own agenda and vested interests, which may not be in line with the nature of the change it is supposed to drive. For example, Parag and Darby (2009) discuss and demonstrate the conflict of interests that energy suppliers (the middle agents in their case) face when needed to bring about emissions reduction from the UK domestic sector. In addition, middle actors may be powerful enough to manipulate the top and / or the bottom and to shift the societal goal toward their own needs.

The recent £10M DECC “Low Carbon Communities” and the £7.5M RCUK call for research on “Energy and Communities” suggest that government agencies recognize the potential of communities to contribute to, and maybe drive a change in, the way we consume and produce energy. Communities are often thought of in geographical terms. We suggest that it worth expanding our thinking of ‘communities’ beyond the spatial terms, as other type of practice – based organizations (PBOs) and community-based organizations (CBOs) might have unique and valuable capacities and agencies too. Communities could be, for example, profession-, ideology-, practice- or faith-based. Each type of community has its own strengths and weaknesses in relation to the desired change. But, at the same time each community has its own agenda and vested interests. These need to be considered too when evaluating communities’ appropriateness and suitability to bring about emission reduction and societal change.

### **3. Case studies**

#### **3.1. Middle as enabler: Building professions and professionals**

We argue that professionals and practitioners are in particular important middle agents for initiating, delivering and promoting infrastructural changes. Transforming the entire stock of existing homes in the UK to be more energy efficient by 2050, for example, is a challenge that

requires 500,000 refurbishments of older, inefficient properties every year (Killip 2008). The sheer scale of these transformations requires radical changes in both technology and work practices. Although optimising the suite of available technical and social strategies for each existing dwelling will yield the best results in reducing carbon emissions, it is a tremendous challenge to assign this task to a fragmented construction industry. In the UK and elsewhere, housing refurbishment is the preserve of small and medium-sized enterprises which include general builders, specialist builders (eg roofing contractors), plumbers, heating engineers, electricians, architects, design engineers, project managers, and building control inspectors. These groups are often considered to be “intermediaries” in the technology adoption process, and as such are expected to provide low carbon refurbishment if their clients demand it. However, intermediary groups have been shown to have their own habits, practices, ways of thinking about problems, and ways of working that affect their ability to provide (and interest in promoting) low carbon refurbishment (Janda 1998b, 1999). How might the need for low carbon refurbishment change the roles of professions, and their interactions? How are existing professions developing to meet the challenge? Which professions will gain control over the new activities involved in low carbon refurbishment? Janda and Killip (2010) argue that a “system of professions” approach may help move the discussion towards *who* is going to make the necessary changes and *how*.

A “system of professions” (Abbott 1988) approach fits within the general sociology of professions (Tripiet & Dubar 2005). It is concerned with the ways in which different professional or occupational groups define their work and compete for authority, which is linked to their use and appropriation of knowledge. From a system of professions perspective, each work group is linked (neither permanently nor absolutely) to a set of socially-accepted tasks considered to be its jurisdiction. Architects, for instance, may see themselves (and be seen by others) as the profession with responsibility for creating quality of place and aesthetic values in the built environment; while engineers are more concerned with the technical practicalities of making structures that are safe, healthy, and thermally comfortable. Professional groups compete and develop interdependently, based in part upon their ability to perform (and defend) the tasks within their jurisdiction. Jurisdictions and professions change over time and are shaped by a number of social, economic, historical, and institutional factors (Abbott 1988; Bureau & Suquet 2009; Evetts 2006). Abbott focuses mainly on the meso or systems level, investigating relationships between professions, but he also looks at the levels below and above. At the micro level, he considers differentiation *within* professions related to work context, and at the macro level, he discusses the larger social forces which create the “system environment” in which the professions exist.

Abbott admits that his framework explains the shape of existing professional groups better than the development of new groups. However, he posits that growth in general knowledge can create a “new” socially legitimate set of problems and therefore an opportunity for new professional group(s). It is this underexplored element in Abbott’s work that most intrigues us.

Is growth in knowledge about climate change—its impacts, causes, and opportunities for mitigation—sufficient to challenge the current system of professions operating in the built environment today? Some industry and government organizations believe so. The WBCSD (2009) argues that a new “system integrator” profession is needed to develop the workforce capacity to save energy. The UK is training domestic energy assessors to draw up Energy Performance Certificates (Banks 2008), while the Australian government is vigorously supporting the development of a new profession of in-home energy advisors (Berry 2009). Each of these entities asserts that a new profession will help solve the “problem”, but each proposed professional solution is different.

We contend that this interest in professions indicates they have an important, yet understudied role in enabling the physical changes needed to meet carbon reduction targets. If this role is left unexamined and unplanned, these groups have the potential to disable (rather than enable) carbon reduction targets in the built environment.

### 3.2. Middle as aggregator: Energy saving across portfolios and between businesses

There are many different ways to divide the building stock. Government energy agencies typically gather statistics by usage types, separating the energy pie into industry, commercial, and residential wedges. When seen through a utility lens, the building stock divides itself into customers of different sizes, based largely on how premises are metered and who pays these bills. A large customer is a large operation with large bill from a single meter. Examples include energy-intensive industries, data centres, large office buildings, banks and financial institutions.

However, there are other ways of aggregating energy-saving opportunities. Large customers can also be composed from a number of smaller buildings owned by a single organization. This creates a different kind of middle, a cluster of buildings treated as a portfolio for energy purposes. The U.S. Department of Energy’s “Energy Star” buildings program is one example of a cross-portfolio effort. Instead of conceiving of buildings as separate discrete units, a tool called “portfolio manager” enables organizations to assess the energy performance of a fleet of buildings.<sup>1</sup> This organizationally comparative benchmarking process helps organizations see their buildings in context with both each other and a national average. Participants in this program include many owners or managers of multiple buildings in different sectors, including government, healthcare, higher education, hospitality, industrial, schools, commercial real estate, retail, small businesses, and congregations. Although the framework for this aggregation comes from the top (the federal government) the impetus and financing comes from the middle. Energy Star is a voluntary information and recognition program, and it does not fund any physical or technical upgrades. Instead, it creates a lens through which actors in the middle (e.g., organizations of many different types, in different sectors) can see and analyze the energy

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<sup>1</sup> [http://www.energystar.gov/index.cfm?c=evaluate\\_performance.bus\\_portfoliomanager](http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager)

performance of buildings across their fleets. After organizations enter the data for each building individually, this lens creates an aggregating frame that allows these organizations to understand the energy performance of a number of properties through a single portal.

In addition to this cross-portfolio management, other opportunities might be found through a single firm hired to operate, maintain, or upgrade a number of properties owned by different organizations. Pacific Gas & Electric (PG&E), an investor-owned utility company in California, has started a project called “More than a Million” (MTM) which changes the traditional way in which energy efficiency programs are delivered (Pande 2009; Pande et al. 2010). Traditional utility programs offer incentives to owners on a building by building basis. Recognizing that this process has limitations for rapid upscale of activity, PG&E implemented MTM. MTM is a vehicle to deliver the utility’s existing energy efficiency services to a fleet of buildings that are organizationally connected in one way or another. It uses the EPA portfolio tool to help create a set of buildings that together constitute more than a million watts of electric demand. Reducing the aggregate demand in these buildings is the goal. It allows for greater economies of scale than the traditional bottom-up building by building approach, as well as access to higher levels of organizational decisionmakers (e.g., CFOs instead of building engineers), and streamlining of delivery services. Yet unlike a top-down regulatory or technology-centered approach, it is tailored to the fleet of buildings the program serves.

### 3.3 Middle as mediator: Congregations and carbon reduction

Congregations have their own established communities. These are based, for example, on shared beliefs, history, values and traditions. Different congregations have different moral authority over their members and thus are in a relatively powerful position to influence their followers behaviour and practices. At the same time, congregations are part of a bigger organizational structure with hierarchy and resources. These bigger organizations are often powerful enough to have a greater influence on practices and local and global decision making and politics. This makes some congregations in a position of mediating middle agents: they can influence the bottom, i.e. individuals’ decision making; the top, i.e. practices and politicians; and sideways, i.e. other a like organizations and congregations.

One example of the mediating role congregations can have in regard to carbon emissions reduction is the Unitarian Universalists (UU) in California. The UU had set itself the challenge to lose 1,000,000 pounds of carbon emissions by Earth Day 2009. In order to meet this goal they formed the “Carbon Rings” in 50 of the California congregations – circles of 5 to 8 UU households (and non-UU friends). The circles meet for eight sessions to build community, and help each other identify and make changes in lifestyles so as to reduce GHG emissions by 5000 pounds per household.

The rationale behind the carbon ring concept is that *“making lifestyle changes is difficult to do alone. A supportive group from one’s faith Community, can help you reach your goals to make your carbon footprint more congruent with your values”*<sup>2</sup>.

The Legislative Ministry of the congregation facilitated the creation of the carbon rings and monitored the progress of meeting the challenge. Ring leaders were provided with two study guides which were chosen to assist the process: “Global Warming: Changing CO<sub>2</sub>urse” – a four session discussion created by the Northwest Earth Institute and “Low Carbon Diet: A 30 Day Program to Lose 5000 Pounds”. In addition, the leader could join leaders’ email list to share progress and questions, or to talk in person to someone who has already completed the challenge. In order to encourage members to participate in the Carbon Ring, the Ministry offered a prize for the most successful community.

Another example for the influence congregations may have on the top and the bottom is demonstrated by discussions and activities taken by Anglican church in the UK<sup>3</sup>. In July 2006’s Synod meeting the church leaders were discussing their responsibility to push the government and individuals to take actions in order to prevent dangerous climate change. The Archbishop of York, Dr Sentamu, *“urged church members to look at the bigger problem to see how they might bring about the reductions the Intergovernmental Panel on Climate Change required”*. The Revd Hugh Lee *“urged congregations to press for government action now as the way of achieving carbon-dioxide reductions. The Mission and Public Affairs Council must develop their arguments and meet the Government who could insist, for example, that all new cars must be fuel-efficient”*. They also discussed how to help their followers to change behaviour and live low carbon life. *Dr Jackie Butcher expressed her frustration at how hard it was to persuade people in her congregation who knew what steps they had to take actually to take them. World-development and environmental issues were inextricably linked. She pleaded with the Mission and Public Affairs Council “Help us make it real for people.”*

Eco-congregation is yet another example of the role congregations take and the agency and capacity they have. One mission of the eco-congregation is to reduce the church footprint by making energy audits and changing organizational practices. *“Climate change which threatens life for millions of people is a moral imperative of such magnitude that we must respond not only as individuals but as the church”*<sup>4</sup>. Energy issues such as church lights and heating and transport means to meeting are tackled by the eco-congregation team and guidelines and recommendations to individuals church are given.

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<sup>2</sup> [http://www.uulmca.org/documents/UU\\_LCC/1-3\\_intro\\_to\\_uu\\_lcc.pdf](http://www.uulmca.org/documents/UU_LCC/1-3_intro_to_uu_lcc.pdf)

<sup>3</sup> <http://www.churchtimes.co.uk/content.asp?id=16552>

<sup>4</sup> <http://ew.ecocongregation.org/downloads/LightlyFootprintChurch.pdf>

These examples show the influence congregations aim to have, and have to some degree, on the top, the bottom and same level (i.e. other organizations). The congregations discussed above believe they should have a position in climate change matters and feel that they have a moral obligation to push their communities to take actions. For this they use their moral authority, and in other words demonstrate the agency they have, to influence individuals' decision making. The congregations discussed above also demonstrate the capacities that established organizations have to deliver knowledge and to initiate actions. They use the established channels of communication to deliver knowledge in organized way to people who might otherwise will not have access to it and channel some of their resources to actions that will reduce climate change.

In many senses these congregations serve as mediators between different levels. They aim to use the power given them by their communities to influence the decision makers, i.e. connect the bottom with the top; They aim to use their organizational capacities to communicate information about climate change and advice on actions from the top, i.e. government and scientist, down to the communities; and they aim to demonstrate actions by changing energy practices of the church itself, i.e. have impact at its own level.

#### **4. Summary and conclusions: Harnessing middles for the challenge**

This paper suggests that different middles have important roles and functions in the transition to low carbon economy and society. These actors' position provides them with agencies and capacities to move, facilitate and support the transition process, in ways that government (top) and individuals (bottom) do not have. Specifically, we demonstrated middle-agents functions of enablers, mediators, and aggregators.

In addition, we demonstrated that middle agents have impact in three directions: upwards, downwards and sideways (as opposed to the top-down and bottom-up approaches). Middle agents may influence decisions taken by individuals, governments and other middle-agents, but they also can shape practices that determine how other actors in different level behave.

Although we assert that making use of the middle has the potential for greater strength and impact, this approach also suffers from weaknesses. The middle has its own agendas, its own interests, and may lack resources available to the top.

The challenge is therefore is harnessing the middle for the transition efforts. This means ensure that they have the right information, that once their actions are aligned with the government policies and national goals, they are provided with the resources that allows them to perform their agency and capacity roles.

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