**Missing Conceptual Links in the International Environmental Policy Debate: Power, Time and Transfer**

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*Abstract*

Over the past 20 years, scholars have examined the role policy transfer has had on the development of environmental policies across the globe. The literature in this area has discussed everything from the movement of cap-and-trade policies to the movement of rain barrels. As the name ‘policy transfer’ implies, studies tend to focus on the successful movement of a policy or program. Part of the reason for this focus is that studies tend to neglect the role power and time play in the transfer process. To begin addressing this, the concepts of power most commonly associated with the three faces of power debate and ideas of political time, policy time and ‘chronological’ time (i.e. timing, tempo, time) can help explain a range of environmental transfers (or non-transfers) better than the existing literature.

**Key words:**

Policy Transfer, Power, Time, Timing, Tempo, Storm Water Management

**Introduction**

Human activity is altering global climate conditions. Fortunately, in the struggle to combat climate change and its effects, many governments are not waiting for others to act. Projects, from Iceland’s goal of meeting the entire nation’s electrical needs with renewable energy to Pittsburgh’s extensive use of green stormwater management techniques to cope with both pollution and damage, are in operation. Unfortunately, while the potential exists for the structures and processes associated with green innovations to transfer and spread, a range of studies have found that less transfer is occurring than one might expect (Dolowitz *et al.* 2011; Medearis and Daseking 2012; Medearis and Sweet 2003). Explanations for the reluctance of policymakers to adopt models they find attractive in other political systems (Dolowitz 2009; Hadjiisky *et al*. 2017) range from lack of adequate resources to ideological opposition.

What these accounts miss is the role that powerful agents and organisations play in this process, particularly in relation to the effective use of (or control over) time, timing and tempo to control the movement and transformation of foreign policies. These important factors help explain why transfer can involve considerable learning and knowledge updating on the part of agents embedded at critical junctures in the political system, to little more than an agent seeing something and copying it with little engagement or understanding of the policy or its surrounding environment (see Argyris and Schon 1996; Bennett and Howlett 1992; Dolowitz 2015; Hall 1993; Sabatier 1988). I focus on studies looking at policy transfer (i.e. the movement of policies, ideas, programmes, etc. from one location to another), leaving questions of learning to others (see Jordan *et al*. 2013).

To illustrate how to use the concepts of power and time I will primarily draw on studies that have examined climate change policies in the United States (US) and China.[[1]](#endnote-1) The choice of these two countries lies in the fact that they not only have fundamentally different political systems, but they are the largest emitters of global greenhouse gasses (together responsible for over 45% of global greenhouse emissions; see Boden *et al*. 2017). Additionally, both nations are finding it increasingly difficult to rely on more traditional grey infrastructure techniques (e.g. sewers and curb and cutter road designs) to cope with climate change and its consequences.[[2]](#endnote-2)

**Methodology**

Methodologically, I rely on a secondary analysis of studies found in the academic, public and professional press. The aim is to reinterpret these studies to illustrate how we can ‘insert’ the concepts of power, time, timing and tempo into the initial analysis to better understand when, why, and how policies and ideas move, while other policies that seem worthy of transfer do little more than draw a bit of interest. Augmenting this approach is primary data drawn from interviews conducted between 2013-2015 in the United States and Germany. In Germany, interviewees were stormwater managers and engineers in Berlin and the wider Emscher Region. Supplementing this is data drawn from a series of interviews examining the movement of ‘European-inspired’ policies to localities across the US, and from one US locality to another. The cities involved were Alexandria (Virginia), Milwaukee (Wisconsin), Chicago (Illinois), Denver (Colorado), and Philadelphia (Pennsylvania). All interviews took place using Chatham House rules. As a result of the close nature of the networks surrounding stormwater management (particularly in the United States), and the procedures associated with using Chatham House rules, I will use the interview data in as anonymous a way as possible, except where participants have given express permission to quote or use their names.[[3]](#endnote-3)

**What is power?**

While power is often associated with state theory, I will primarily use the conceptions of power developed under the ‘three faces of power’ debate to help explain why some ideas and models transfer from one nation to another, while others remain planted in their originating system. In the first instance, Dahl (1957) drew on Weber’s concept of power to develop what has become known as the first face of power: where A has power over B to the extent A can get B to do what they otherwise would not do. Pluralists argue that the use of power occurs when one set of actors get their way in (or gains from the outcomes of) a decision-making situation. The second face is most commonly associated with Bachrach and Baratz (1962, 1975) who analysed the role of ‘non-decision making’ in the policymaking process. For Bachrach and Baratz there is an unspoken or restrictive face of power, where the powerful use their influence to prevent the airing of issues or conflicts perceived as contrary to their interests. In the area of climate change, Lukes’ third face of power (the closest to a Gramscian view of hegemony) is present when agents are convinced to act in ways that are against their interest even though they think otherwise (Lukes 1974).

While scholars often refer to the three views of power as negative sum games, in that the more power one has the less power another has, we can view power in a fourth way, as an additive or positive force, where agents work together or are embedded in supportive structures (in coalitions or networks) that enhance the power of all members of the coalition. Haas (1990: 13) views ‘coalitional power’ as the ‘power to impose its will simply by virtue of its superior voting strength, or as a result of its Gramscian ability to socialize and persuade its opponents into the position the coalition prefers’. When this occurs, the new policy is in ‘the common interest of the coalition, arrived at…utilizing knowledge and imposed by threat or verbal guile on the unwilling borrowers’.

**Power in practice**

At its base, when agents interested in transfer (e.g. teacher/sender or learner/borrower) attempt to initiate the process (or use transferred information) they can find themselves in a position to engage in transfer or they can face insurmountable obstacles (at least at that point-in-time). This is a result of when and how different power holders wield their authority during the transfer and policymaking processes. For example, all political systems have actors in veto positions (explicit and veiled). These positions allow actors to use the mechanisms associated with the first and second faces of power to gain advantages in the presentation and decision-making processes, often at the expense of other potential solutions or outcomes (Dolowitz and Marsh 2000). Only by working with these agents or finding ways to bypass them will those with less power be able to forward their solutions.

*Powerful actors are not always where they seem to be*

On the surface, carbon trading schemes should be capable of moving from one jurisdiction to another (Ellerman *et al*. 2003), the idea being little more than to establish an overall cap on permissible pollution loads and then provide industries a given number of tradable permits they can buy and sell in order to keep the overall cap within the limit (EPA 2017a). In this process the 1970 Clean Air Act would appear to provide the US Environmental Protection Agency (EPA) the power to design, spread and force individual states to adopt pollution abatement standards and mechanism, including cap-and-trade (EPA 2017b). However, the Act also allows states to ‘adopt enforceable plans to achieve and maintain air quality meeting the air quality standards’ (EPA 2017b). As a result, rather being an agent of force, the EPA has to use a softer approach providing information, publishing league tables, developing, collecting and publishing examples of best practice (in and outside the US). The idea being to use second face-type powers, to persuade and encourage states to ‘voluntarily’ adopt cap-and-trade as part of their overall clean air policies.

*Transfer and coalitional power*

While some of the larger states in the US (in terms of gross domestic product (GDP)) have used their central power to force local governments to institute EPA approved cap-and-trade policies, several states with smaller GDPs and political clout, have actively formed coalitions (often including a large state) in an attempt to increase their overall power to regulate polluting industries and institute cap-and-trade policies. One example, the West Coast Global Warming Initiative (WCGWI) was an effort by California, Oregon and Washington to combine their power to reduce greenhouse gas emissions in ways that individually they could not in the face of local and industrial opposition (WCGWI 2004, introduction). In relation to transfer, WCGWI acted as the model for the Western Climate Initiative (WCI). By basing the WCI on the WCGWI (the Southwest Climate Change Initiative and EPA recommendations), the subtle impact of the second face of power is apparent. Not only were models retaining the status quo kept off the agenda, but the models of cap-and-trade offered by the EPA and California were the only models considered (Interview conducted 2014).

*Transfer and the third face of power*

When agents get involved in the transfer process, the third face of power can shape how they use their primary power. Take the role ideology played in Arizona’s participation in the WCI agreement. Less than year after entering office (and a year before WCI cap-and-trade was to take effect), Arizona’s new Republican Governor, Jan Brewer, took Arizona out of WCI arguing that economic conditions were no longer favourable. While a clear use of first face power, the decision appears to do with the underlying third face of power in that WCI was negotiated and entered into by the former Democratic Governor Janet Napolitano (whose ideological beliefs conflicted with those of Governor Brewer) and despite claims to the contrary, no major social or economic change had occurred over this period (For GDP statistics see: https://www.azcommerce.com/resources/economy/gdp; for the official announcement pulling Arizona out of WIC see: <https://legacy.azdeq.gov/function/news/2011/download/111611_2.pdf>).

*The first two faces of power and the use of transferred data*

Other cases that help illustrate how scholars can add power to the transfer literature and analysis can be drawn from how some state legislators utilised their position in the policy process to keep EPA models off the agenda (non-decision-making) in order to develop regulations that either favoured industry or excluded a number of polluting industries from their cap-and-trade programs (Crampton and Kerr 2002; Groenenberg and Blok 2001; Goulder *et al*. 2010; Pustelnik 2016; Stavins 2008). As part of this, legislators often used their political position (and the power it conveyed) to act against the advice of their own administrators in order to oppose the use of transferred models (Xu *et al*. (2017), illustrating all three faces of power in action (Avi-Yonah and Uhlmann 2009; Murray *et al*. 2009).

The second face of power is also apparent in the way agents used transferred ideas and information in the policy process. Take the testimony of Ben Lieberman to the US Congress:

From German automakers to Italian steelmakers to nations that still rely on coal for a substantial percentage of electric generation, discussions about exclusions and delays and handouts are now very much a part of the debate in every European Union meeting on climate. The Russian cutoff of natural gas to Europe was also a reminder of the geopolitical risks of…cap and trade. (Lieberman 2009: 1)

By framing his testimony in the negative, Lieberman provided opponents of cap-and-trade in Congress a justification for keeping international lessons off the agenda. Not only was Lieberman’s testimony cited by Congressmen as a reason for objecting to EU style carbon trading schemes, but Congressional Republicans relied on a non-decision-making strategy by only calling on testimony from those opposed to the adoption of carbon trading schemes (US Senate Committee on Foreign Relations 2009; US Senate Republican Conference, *Energy and the Economy* 2009).

*China, transfer and the three faces of power*

While the US offers countless examples of how a system creates power positions that facilitate or block transfer, China offers a similar set of power structures despite a distinctly different system. Thus, in 2011 China announced that it would ‘gradually promote the establishment of a carbon-emission market’ based on European Union (EU) models (State Council Information Office 2011). Chinese policymakers looked to the EU carbon trading market as a model capable of alterations and transformations (State Council Information Office 2011). Consequently, Chinese policy shoppers were able to pick and choose from the national models they wanted to pilot. While China limited itself to what was occurring in the EU, the information shared (and excluded) by European policymakers in their presentations and discussions with Chinese delegations fell directly into the second face debate as limiting what is accepted as ‘good’ is a form of ‘non-decision making’. In brief, information that they felt ‘would not be of interest to the Chinese delegation tended to be excluded’ (interview conducted in Berlin, 10 April 2014).

The role of power also emerges in the follow-up work of Liu *et al* (2015). They reported that those involved in transferring carbon trading policies from Europe found that many details of the EU system were being deliberately ‘neglected in the Chinese pilot projects’. The reason for the apparent failure was a result of the agents, who initially suggested the EU models, not having the power to follow their preferred options though to implementation. As is often the case, during implementation new actors got involved who had the power to alter policies to fit their needs and interests (see Dolowitz *et al*. 2019).

The directly observable first face of power similarly emerged after the EU passed Directive 2008/101/EC, which brought international aviation into the EU’s emissions trading system. At this point, the Chinese leadership took an active veto role, arguing that the EU model was inappropriate for a ‘China-wide policy’ because the changes adopted by the EU were not a ‘natural evolution’ in the system (as EU authorities were suggesting), but rather a way to restrict Chinese EU-bound air traffic (Pustelnik 2016).[[4]](#endnote-4)

*International power shows itself in the second and third faces*

At the international (and national) level, ideas and norms form and become accepted as correct or natural (third face of power). When this happens, nations not complying with these norms often find themselves under internal and external pressures to fall into line. Thus, not only were Chinese decision makers under pressure to accept the evolving global paradigm, but there was also a perception amongst Chinese leaders that by moving ahead with reform China could gain a competitive advantage in the production of green energy technologies. As Mufson (2015) noted ‘in an unexpected move, China’s President Xi announced that China was going to implement a “green dispatch” policy to give non-carbon producing renewable energy projects top priority on the electricity grid even if that means cutting back on electricity produced with fossil fuels’.

Falling into the second face of power, in respect to the perception of who would have the knowledge to make change, the Chinese government employed former EPA officials and members of American environmental organizations to oversee their move toward green energy. Not only were these actors able to funnel specific information (as discussed in the second face of power) in relation to green energy solutions, but their very presence also illustrates the importance of the movement of actors around the global system in the transfer process (Mufson 2015).[[5]](#endnote-5)

The location of powerful actors impacts transfer processes. Additionally, when, why, and how these actors choose to use their power to structure the game matters. This occurs through the selective use of information, manipulating whose evidence and advice is presented, the types of alliances they form, and the active efforts to shape the discourse and options available at any given point in time.[[6]](#endnote-6) Power also occurs in how coalitions, global norms, models and paradigms set the parameters of what is acceptable. Accordingly, while transfer studies often look at international non-governmental organisations (NGOs) and international governmental organisations (IGOs), national governing structures, and sub-national structures, they tend to neglect how levels of governance interact, provide and shift power between players. This overlaps with the way agents come and go in the policy process, often seeing unexpected actors gaining power (environmental NGOs), others losing power (EU), and still others having less power than depicted (EPA) (Biermann and Siebenhüner 2009; Larner and Laurie 2010).

*Structurally embedded competition can cause clashes and encourage the formation of coalitions*

Power impacts the nature of transfer. The 1972 Clean Water Act (and the 1987 Amendments) provides the US EPA with the responsibility and authority to protect the nation’s rivers and waterways. Rather than using its first face to force change, the EPA tends to rely on ‘soft or second face power’ to initiate the development and transfer of best management practices (BMP) in relation to low impact development (LID) programs. While this allows for a high degree of transfer opportunities, it also enables a large number of competing power centres to enter the developmental and implementation processes, leading to many ‘local stormwater regulations, ordinances, and codes [lacking]…clear goals, objectives, and policies toward achieving sustainable stormwater management’ (Kim and Li 2016). Part of the issue is that studies of environmental policy transfer tend to overlook how political structures empower local actors (from planning agencies to highway agencies, from those developing local building codes to park and recreation departments), and then how they subsequently impact on the transfer process. One exception is Kim and Li (2016) who report over 60 indicators of sustainable stormwater management at the local level in the US. According to Kim and Li, each of these indictors has a unique set of associated actors, networks and coalitions. Because of the shifting nature and location of power, local stormwater regulation tends to reflect less what the EPA desires than the views of those sitting in the ‘winning’ coalition when measures are approved and implemented.

In this, local executives are not passive implementers of state legislative initiatives. Rather, many of the nation’s mayors are active players, in some areas joining together to increase their power in the face of legislative opposition. For instance, the National Conference of Mayors established a stormwater management standing committee (Mayors Water Council) in order to share best practice and increase the power of individual mayors in the process of forcing changes to local water management policy (National Conference of Mayors 2017). Not only have mayors joined together to increase their individual power but, to further their power, mayors have deliberately brought in expertise from outside organisations, in a way similar to what occurred in China (National Conference of Mayors 2017).

**Time – timing – tempo**

*Horizons and resources*

When examining transfer, it is important to add time to the analysis. As Schedler and Santiso (1998: 5) noted, despite the fact that time ‘in its manifold manifestations represents a pervasive factor in political life…as a rule, reflections on politics and time have remained unsystematic, implicit, and disperse, and our theoretical insights, conceptual tools, and empirical knowledge have remained severely limited. More recently, Pollitt (2008: 11) stressed that ‘time is a vital, pervasive, but frequently neglected dimension in contemporary public policymaking’. When studies integrate time, it tends to be as a horizon or a resource. As a ‘horizon’, time involves the examination of how the potential future, the known past, or the present configuration of actors, discourses and institutions impact the policy process. As a ‘resource’, time is seen as ‘scarce and nonrenewable, a limited measurable quantity to be allocated through timetables that determine the duration, the tempo, the timing, the sequence, and the periodicity of actions and events’ (Schedler and Santiso 1998: 6; see also Schmitter and Santiso 1998). In fact, the ‘*Mere passage of time*, leaves its own imprint on certain structures and processes’ (Schedler and Santiso 1998: 13, emphasis in the original).

Clearly, the ‘present’ time matters, if for no other reason that it points to the configuration of actors and institutions involved in the transfer and policymaking processes.[[7]](#endnote-7) It also highlights what constraints agents of transfer face when engaged in the transfer/policymaking processes and the types of paradigms that are structuring the overall transfer discourse (Dolowitz *et al*. 2019). Seeing time as a horizon also helps explain when and why different agents can enter/leave the transfer process or stay active throughout the transfer/policymaking process, and why can they guide a solution through to its final implementation.

*Timescapes*

The literature associated with timescapes offers another view of time. Here political time stands out as particularly useful for helping to explain why a given agent is able to take advantage of (or is restricted by) ‘windows’ and ‘opportunities’ that emerge in different political cycles. For instance, electoral cycles speed-up and/or slow-down efforts to engage in transfer. The configuration of governing parties, the ideas receiving attention, and, whose issues are accepted for action are subject to alteration as a result of electoral outcomes (see Kostka and Zhang 2018). Political time brings about regular events that impact power relations, politics and the realms of acceptable (e.g. annual meetings of global leaders). Any of these events can potentially structure the transfer process and shape who is present in the transfer process (Bulmer 2009; Goetz and Mayer-Sahling 2009; Mayer-Sahling and Goetz 2009; Pierson 2004).

*Time, timing, tempo*

While almost any conception of time would greatly enhance the existing transfer literature, I use the Schmitter and Santiso (1998) framework. Specifically, I draw on the resource conception of time as involving time, timing and tempo. At its most basic, time is the flow of history: the chronological period shaping past, present and future decisions. Joined to transfer, time is the period through which a transfer occurs and the time it takes the transferred information to enter and work its way through the policymaking and implementation processes. Timing, on the other hand, is the sequencing of events leading to a specific decision. When connected to the transfer process, we can see timing as the ‘moment’ a transfer occurs or the moment a transferred policy is implemented, or even the moments that can be identified when a transfer undergoes transformation into a unique policy (Farhad 2014; Dussauge-Laguna 2013; Park *et al*. 2014). Finally, tempo is the rhythm of the process. Linked to transfer, tempo is the speed at which a transfer occurs and the efforts of agents to speed-up and/or slow-down this process to suit their needs, windows, and other factors that emerge during the policy process. When linked to transfer, timing and tempo are malleable, often subject to conflict and compromise between competing actors and institutions (see Bulmer 2009; Schmitter and Santiso 1998).

**Time in practice**

For those involved in the transfer process, it is important to understand when the optimal moment for the movement of information occurs. In the US, one need look no further than the movement of pro-environmental policies before and after the Trump Administration took office in 2016 to see the importance of time. Under the Obama Administration, the EPA was actively involved in enforcing the Clean Air and Water Acts, developing databases of ‘best practices’ from around the country and world. The regional offices also had a strategy for sharing and promoting best practices amongst each other and the states and local units they oversaw (interviews at EPA regional office July 2014). However, Scott Pruitt (EPA Administrator) and his successor Andrew Wheeler (former energy lobbyist) have actively reversed the enforcement of environmental regulations. Additionally, the EPA’s efforts to publicise and promote cap-and-trade and LID techniques have almost halted. This reversal is so complete that many of the Obama-era clean air and water regulations are being eliminated and replaced with extremely industry-friendly alternatives. In fact, in an effort to shape the discourse and available information on the environment, EPA Administrator Wheeler has removed much of the previous administration’s website data relating to environmental security and downplayed the importance of scientific evidence – including that associated with clean air and water (Davenport 2018).

In a similar way, prior to the arrival of the Trump Administration the vast majority of EPA clean air rules were based on the best available science from around the globe. However, under Pruitt and Wheeler it is becoming increasingly clear that science is taking a back seat to ideology and industry preferences. All told, with the arrival of the Trump Administration those interested in advancing environmentally friendly and scientifically supported policies have had their voices disregarded.

If time is important in explaining when an idea or policy can travel, it is equally important to understand how the tempo at which transfer occurs impacts transfer and the power configurations. While all political systems can make policy decisions quickly when needed, many systems require considerable timeframes in the passage and implementation of legislation. For instance, as a general rule, legislation in the US has to survive the legislative agenda, which is often a long-drawn-out process, before being passed by the House and Senate, and receives a presidential signature. Once transferred policies and ideas are introduced, they must survive a range of legislative and executive stages. At any of these stages transferred information is likely to be transformed, combined, or rejected. When integrating transferred ideas into legislation it is not possible to guarantee their survival. Rather, a range of factors impact the implementation process, not least the necessity of subsequent public hearings, comment periods, potential administrative obstruction and the introduction of new actors and networks, that can shift the power relations associated with the policy.

In China, the role of time, timing and tempo is easily visible in relation to the movement of cap-and-trade policies. In brief, over time, the EU’s influence fell while the power and influence of other organisations, such as the US NGO Environmental Defense Fund (EDF), increased (Keohane 2015). I stress this because the power of an agent often depends on their ability to remain in the transfer and policy process for extended periods. In this case, by helping to operate a series of pilot projects over the course of almost 20 years, EDF was able to develop, spread and convince China’s leadership of the superiority of EDF’s ideas and the importance of implementing a national cap-and-trade market. As part of this, EDF was able to take advantage of timing: a critical political opening between the US and China under the Obama Administration. This allowed EDF to build ‘on a successful model the United States used to reduce acid rain…for which our China team provided key technical assistance’ (Keohane 2015). Operating in China for over two decades, EDF was able to focus on a single issue, developing knowledge and helping set the tempo of change. While, the tempo of change was important, the timing of the process proved critical – occurring when warm relationships between Obama and Xi Jinping, and the international consensus on the need for climate action, drew both countries into the Kyoto (which incorporated the concept of tradable permits) and Paris Climate Change Agreements.

**The interplay of power and time in the policy process**

While actors make transfer happen, most studies view actors as rational or semi-rational, making decisions based on some form of cost-benefit analysis: the higher the benefit in relation to the costs of adopting a foreign model, the higher the probability that transfer will occur (Llaci *et al*. 2010; Rose 1991; Schimmelfennig and Sedelmeier 2002; Dimitrova and Steunenberg 2017). In this formula, actors are benefit-seeking agents with in-depth (even if partial) knowledge of the causes and consequences of their actions and decisions. More importantly for this discussion, the rational model assumes that the actors involved in the transfer process have the power to carry out their preferences through to its final implementation. This analysis tends to result in a static view, in which actors do not change, always have the same amount of power and the same preferences, and are continuously present in the transfer and policymaking processes. However, not only do actors change (and alter their positions as time and circumstances change), but one set of policies may empower (or disempower) agents operating in the same or overlapping policy areas.

For instance, based on German experience (and a considerable learning period on the part of local officials), Washington DC implemented a Green Area Ratio (GAR)-based stormwater fee system, backed by the integration of geographic mapping technology (GIS systems) to inform zoning regulations. The goal was to make fees more equitable, establish a new tax system, and introduce tradable permits designed to set ‘standards for landscaping and site design to help reduce stormwater runoff, improve air quality and keep the city cooler’ (Department of Energy and Environment 2017). In response the Mount Olivet Cemetery, under the advice of the EPA and an NGO, The Nature Conservancy, altered their development policies, introducing a program of EPA-modelled LID updates (Cidlowski *et al*. 2014; Nature Conservancy 2017; Zoning DC 2013). This decision (and model) convinced a number of churches to introduce similar measures over the following years, even in locations that fell outside the DC GAR program (Pipkin 2018).

Policy areas impact each other over time, cycles, and levels of governance. Actors work at, interact and compete with others in order to take advantage of decisions made at other levels of governance to empower and/or disempower competing agents involved in transfer. Similarly, institutions and coalitions interested in transfer work with and attempt to shape opportunities that time and timing provide. While much of the literature surrounding environmental policy focuses on single points in time, single levels of governance or single policies, many issues involve overlapping time frames, policy cycles, and policy areas, which often see lower levels of governance having more power than those above them.

In the US, as a result of the multiple levels of governance, the number of policy areas crossed, and the range of institutions involved in governing environmental issues, agents interested in environmental transfer tend to have numerous opportunities to engage in, transform, or block transfer; in addition to the EPA, there are over 16 other federal agencies, ranging from the Tennessee Valley Authority to the Department of Defence, that have overlapping responsibilities in relation to environmental policy (Vig and Kraft 2000). Consequently, local policymakers can (and do) take advantage of tempo control and windows of opportunity to ‘interpret’ federal regulations, play institutions off each other, and work at influencing ‘friendly’ agencies in order to get their preferred solutions adopted. When integrating federal environmental regulations into local planning, zoning, and tax regimes, the range of actors and stages involved provide agents considerable room to negotiate. All of which makes understanding the role of time, power and the way they interact and change vital if one is to understand American local level environmental regulation (Dolowitz *et al*. 2011).

In the transfer process, those able to utilise sequencing (or move around institutions) or jump from one policy arena to another are more likely to experience success in having their preferences adopted. Linking time and tempo, sequencing can take years of work and dedication by individual entrepreneurs and institutions. The development of Northern Virginia’s ‘Regional Energy Strategy’ provides an excellent illustration. Specifically, the *Northern Virginia Regional Commission Regional Energy Strategy* document notes:

The lack of agreement on comprehensive national and international energy and climate policies has increased the burden on local authorities…In response, communities in Northern Virginia have created a new paradigm for addressing energy and climate issues…at the regional level. Therefore, the Northern Virginia Regional Commission, at its February 24, 2011 meeting, directed creation of an Energy and Sustainability Task Force and creation of a regional energy plan. (NVRC 2011a: 1-2)

Prior to this, the NVRC had been working on spreading the concept of district heating and regional energy planning for almost a decade (based on the experiences of Germany, Greece and Denmark). More importantly, Dale Medearis and his colleagues acted as entrepreneurs within the NVRC (Medearis and Sweet 2003; Medearis and Daseking 2012). In this, the NVRC followed a step-by-step approach to spreading the idea of district heating from one locality to another, until the idea had spread widely enough to start advocating a regional approach. Timing was critical: a window appeared for the NVRC because of austerity measures introduced in Virginia, which led many local governments to look for solutions to the costs of heating and climate change issues.

Since 2011, the NVRC has been ‘modifying the approach…to provide for the development and implementation of a Regional Energy Strategy that complements and supports local energy plans and the work of the Metropolitan Washington Council of Governments (MWCOG) Climate, Energy and Environment Policy Committee (CEEPC)’ (NVRC 2011b: 2). This slow, deliberative approach to change was subsequently used in the development and implementation of the Northern Virginia Regional Commission Regional Energy Strategy. Specifically, it states that: ‘Based on targets, goals and measures set by Northern Virginia localities and the MWCOG CEEPC, identify the short-term, mid-term (2020), and long-term (2050) energy use/GHG emissions reduction goals, targets and metrics’ (NVRC 2011b: 4). The NVRC’s success is (partly) a result of others accepting it as an actor with good ideas, power and legitimacy. As this developed it allowed the NVRC to get involved at different points in the policy process; and introduce its preferred solutions at critical moments in the policy cycle at the local, regional, and state levels, often simultaneously.

To understand the NVRC’s success, it is vital to understand how it worked in the policymaking process over recent decades. First, there was a policy entrepreneur embedded in the NVRC (Dale Medearis), who used his position (and his former experience at the EPA) to learn from overseas examples. Second, the NVRC actively worked at developing ways to embed its expertise in the state’s governing structures. This allowed the NVRC to use the local, regional, and state policy process to expand the range of contacts and policies it was able to advocate. Third, by working with multiple time horizons, tempos, and timing, the NVRC was able to get itself embedded throughout the state. This allowed the NVRC to ‘spread ideas, despite the fact they were based on the models imported from around the globe’, particularly Germany, France and the Netherlands (interviews 11-14 August 2014). Finally, it is not enough to observe the development of a special ring-fenced unit dedicated to transfer. Rather, it is vital to observe the outcomes of such a unit. If the ideas borrowed do not spread, then the unit might not have the power to share effectively its findings. However, if embedded actors and units are having a policy impact, this might help explain where power lies, how it develops over time, and how it changes as a policy moves from one level or location to another, bringing in new agents and structures.

This process of ‘embedding lessons’ into policy relevant governing units was the NRVC’s goal. It actively engaged in learning from overseas and then developed its influence in the policy process allowing it to transfer lessons to local governments. The NRVC actively used the examples of successful transfer at the local level to convince the Commonwealth of Virginia to engage in a similar process. Thus, three years after the launch of the Regional Energy Strategy the NVRC was able to convince Governor Terry McAuliffe (window opening with his election) to launch a sustainable development partnership with France, which was based on NVRC’s model for international cooperation (Gibb 2014). Building on their efforts to integrate overseas lessons into the policy processes and policies of the Commonwealth of Virginia, after a decade of work, the NVRC proved integral in the decision of the City of Alexandria to integrate the German model of stormwater fees (based on a GIS survey of impervious surface area) into their tax system (see City of Alexandria 2018).

All told, when examining transfer processes associated with environmental policies and practices, an understanding of how entrepreneurial organizations take advantage of time and power to both advantage their ideas and solutions but also help embed key individuals in core position in the policy process is essential.

**Conclusion**

Much has been written about policy transfer and how the structure of different political systems shapes the overall transfer process. However, when power and time are linked to the transfer concept, even systems as different as the United States and China can be seen to face similar issues in relation to the role of embedded perspectives, structural positions and time frames. For instance, both American and (to some extent) Chinese bureaucratic institutions tend to have ‘weak alignment between agencies’ international urban cooperation and their domestic priorities and missions’ (Medearis 2013: 4). The issue this creates for those interested in transfer is that it ‘feeds the perception that international cooperation delivers marginal returns rather than tangible improvements’ regardless of the overall structure of the political system (Medearis 2013: 4).

Following this pattern, when linked to China and the United States the concepts of non-decision-making and perceptual blinders (third face of power) were shown to interfere with (and prevent) those interested in the transfer of ideas and policies from Europe. More importantly, in the US under the Trump Administration, ‘the international science and technical work…is choked for resources and funding’ (Medearis 2013: 5). As a result agents interested in transfer often need to (if possible) use time in order to alter the policy environment in ways that modify existing power configurations to better reflect their needs. As Medearis (2013: 7) puts it in relation to the role of Science and Technology (S&T): ‘To ensure that U.S. cities have access to the best knowledge available, a broader vision for the international S&T cooperation of U.S. agencies is needed. Beyond relationship-building or development goals, U.S. science diplomacy can and should include achieving tangible outcomes that serve U.S. priorities at home’.

One possible way to address issues of power and time is to examine situations where transfer agents (both inside and outside governing institutions) have successfully embedded themselves into the policy process. In some cases, this will be easy to analyse; in Britain, the Blair government’s Policy Unit’s purpose was to work with other institutions around the globe to share ideas and policies that could inform British governmental policy. In the area of environmental policy this type of embedding can be seen in China where multiple US and international environmental organisations worked over time to embed their ideas and positions in order to influence Chinese policy. In a similar way the NVRC ‘developed an international framework to guide its programs by prioritizing collaborations with [innovative] countries’ which over a decade of operations led to the development of ‘a Global Innovations Committee…to support the NVRC’s international work and the unilateral transfer of best practices from overseas to Northern Virginia’ (NVRC 2014: 1-2).

Not only is it vital to examine agents of transfer and how they interact with the structures surrounding and shaping environmental policy, it is equally necessary to examine how different levels of governance provide and restrict opportunities because of to how they configure power. Thus, while it may appear from the outside as if the Chinese central government has complete control, once one starts to disaggregate the situation it is clear that local actors and governments are just as important in their ways as state and local governments are in the United States.

While it is not necessarily an easy process, the more scholars integrate and engage with the concepts of power and time (and their interaction) the more likely they are to discover why some lessons are transformed, why perfect policies never get looked at, and why those that are clearly not appropriate for transfer are moved.

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1. Gilley (2012) frames the environmental policy approach as Democratic (US) vs Authoritarian (China) Environmentalism. Despite the difference between the two systems, they encounter similar problems once policies move to the local level. For similar analysis see: Shin (2018). [↑](#endnote-ref-1)
2. For a more general review of clean air and water policies in China see: Seligsohn, Liu and Zhang (2018). [↑](#endnote-ref-2)
3. For a similar discussion focused on how policy instruments become established, pushed and change as they move over time and place, see Voß and Simons 2014. [↑](#endnote-ref-3)
4. China launched its own pilot version in Shanghai (see Liu *et al*. 2015). [↑](#endnote-ref-4)
5. The Chinese government also acted in response to economic opportunities and internal pressures to address air quality in major cities. [↑](#endnote-ref-5)
6. An aspect of power that I do not elaborate here is the hegemonic role of neo-classic economic ideas, i.e. the decision to use market mechanisms, such as carbon trading and tax incentives, instead of potential non-market mechanisms. [↑](#endnote-ref-6)
7. This links to the dominant paradigms structuring the policymaking and surrounding discourses at the time (or time horizons) transfer occurs (Bulmer 2009; Featherstone and Radaelli 2003). [↑](#endnote-ref-7)