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Acting upon Paths:
Alternatives, Contestation and Fragile Stability in Path Dynamics

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Abstract

Path dependent explanations of complex historical developments are receiving increasing attention in a number of disciplines. They contribute a unique process perspective on temporal ordering and causal explanation and add to a multifaceted understanding of institutional settings by linking outcomes with earlier events. However, the imprecise conception of historical dynamics has led to ambivalent historicism ranging from the banal insight that history matters to a strong notion of determinism. We aim at contributing to this debate by focussing more closely on the role of actors and their impact on the development of recurring trajectories as well as their submission under emerging structures. The paper sets out to deepen conceptual debates and to provide some clarifications to recent advancements in the path dependency literature. Ideally, this leads to a better understanding of the role of actors in institutional reproduction and change with regard to the specific conditions of long-term trajectories. We propose a more strategic perspective to act upon paths outlining the importance of resources in institutional settings that display stable characteristics which at the same time are inherently fragile.

1. Introduction: Actors in Path Dependency Concepts

In recent years, concepts of path dependency have gained ground in economics, business studies as well as sociology and political science to make sense of long-term developments. Their strength lies in linking earlier events with later outcomes providing explanations for the endurance of institutional settings. Such historically induced approaches provide challenges to rationalist accounts, most notably in economics. At the same time, they tend to overestimate institutional and organisational inertia whenever they neglect agency. The classical example of path dependency are processes of standard-setting in which suboptimal solutions have become the dominant standard despite more 'efficient' alternatives (David 1985; North 1990). Today, the debate extends far beyond economics explaining persistence and durability in different institutional settings. However, many conceptions rely on deterministic understandings of developments and tend to neglect actors' capacity to actively influence the developments of paths. Focusing on the process dynamic of path development allows to better grasping how actors shape their organisational environment without neglecting that they are subject to the very same institutional requirements they produce. In short, we introduce the metaphor of *fragile stability* to illustrate the potentials and limitations actors are confronted with when involved in processes of path development.

In addition, we suggest a more strategy-oriented perspective spelling out conditions how actors influence path trajectories with regard to strategies and resources in recurring interactions. This includes looking at how actors perceive, understand and shape feedback dynamics. Consequently, this implies a shift in the debate from path *dependency* towards *the impact of actors* on paths and causal trajectories. And it brings about new questions, such as: What are prerequisites for influencing path dynamics? How do actors affect formative processes? Who is best suited to engage in dealing with self-reinforcing

dynamics? In brief, we are looking for how and under which conditions actors shape the development of paths and how paths in turn contribute to establishing conditions for agency.

To answer these questions, we do not propose to fall back to a rationalistic actor model still dominant in economics. Instead, in order to integrate organisational perspectives on agency with self-reinforcing dynamics we propose a more open framework. To adequately grasp dynamic processes over time as well as non-linear effects, unintended consequences and paradoxical solutions, we advocate a more elaborate conceptualization of agency inspired by structuration theory. We start this paper by briefly reviewing different conceptual origins of path dependency, revisiting the role of actors and focussing on the notion of alternatives. The second and main part firstly introduces the concept of actor constellations and explores two underrated categories for understanding the role of actors in path dependency, namely momentum and benefit distribution. Secondly, we outline different principle strategies to act upon paths. In the last section we conclude the paper by summing up how actors contribute to establishing and maintaining influence over institutional trajectories by creating, taking advantage of, but also threatening the fragile stability which characterises path processes.

1.1 Historical Explanations of Permanent Inefficiency

The central idea of path dependency in historical economics is to explain how later developments and institutional configurations are linked to earlier events. Classical works have defined paths as inefficient but remarkably stable institutional settings (cf. David

1985; Arthur 1989; also North 1990). Early empirical studies have focussed on technological standardization such as the QWERTY keyboard or the VHS video format.[1] Arthur (1989) provided the theoretical argument of increasing returns to explain stable institutions that evolved out of randomly selected choices due to increasing returns. Increasing returns are mechanisms of positive feedback which over time reinforce initial choices or decisions. Arthur names four different but potentially complementary features generating increasing returns: a) large-set-up costs of particular technologies; b) learning effects of actors involved; c) coordination effects or network externalities; and d) adaptive expectations similar to self-fulfilling processes (see also Pierson 2004: 24). Interestingly, a one-sided reception of increasing returns in institutional perspectives has led to the loss of one of Arthur's core insights. Instead of focusing on the modes of reproduction and change, he clearly spoke out against the stabilizing effect of increasing returns: "Increasing returns generate not equilibrium but instability" (Arthur 1996: 100). We agree with Arthur that in contrast to many assumptions in economics or historical institutionalism equilibria are not a given. On the other hand, an agency perspective has the potential to contradict Arthur. As we will show in the main part of this paper (section 2), increasing returns have the potential to lead to stability. However, creating a fragile state of contemporary stability which becomes reproduced, but which also has potential for change.

Due to the strong focus on the self-reinforcing character of increasing returns, classical works of path dependency tend to lose actors out of sight. In fact, economic interpretations of increasing returns rely on and also fortify a rather mechanistic understanding of institutional development. It is not by coincidence that Arthur uses the Polya Urn model

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[1]   For a critique see Liebowitz and Margolis (1990, 1995), who have argued against David's case study of the QWERTY keyboard from both an empirically as well as a theoretically point of view.

which allows modelling stochastic processes in probability theory frameworks.[2] Even thought, other institutional approaches have adopted less strict methodological reasoning their dominant focus has contributed to a widespread bias of stability and inertia and subsequently not taken much interest in the conditions of and consequences for agency in perspective of path processes.

1.2 Path Development as Macro-Institutional Reproduction and Change

Institutional works of political science and sociology have emphasized the relevance of temporal ordering, sequential developments and self-reinforcing dynamics for macro-institutional reproduction and change (Thelen 1999; Mahoney 2000; Pierson 2004). These conceptualizations go beyond explaining the stability of inefficient solutions. In fact, institutional approaches highlight the complexity of social dynamics in which feedback loops and self reinforcement are also explained by complementarity, power and legitimacy (Mahoney 2000; Deeg 2001; Beyer 2005). From an institutional perspective, James Mahoney (2000) has so far provided the most encompassing account of explanatory mechanisms for institutional reproduction and change. Taking the feedback mechanisms of economic history as a point of departure (in Mahoney's terms: utilitarian explanation to institutional reproduction), three other sociological frameworks are added to bring in functional, power, and legitimacy explanations with which he seeks to explain institutional developments (Mahoney 2000: 517ff.).

By focusing on mechanisms of self-reinforcement and change, macro-institutional approaches offer explanations for institutional change which allows to integrate actors.

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[2]   Crouch and Farrel (2004) have pointed to the epistemological and practical implications of this.

Their strength lies in analysing how institutional settings shape the conditions for agency. Even though the potential to act upon macro-institutions is considered (cf. Mahoney 2001), strategic action and practical intervention is not of prime interest. Recently, a more dynamic perspective on institutional development has been discussed, partly to overcome an inherent conservancy in the debate of path dependency (Beyer 2005). Even though Thelen has pointed out that the often suggested overly contingent initial conditions are as misleading as the excessively deterministic conceptualizing the progressing paths (Thelen 1999: 385), no clear prescriptions on how to integrate agency are derived from that insight. Only recently have agency and the generation of paths been explicit focus of institutional work. Djelic and Quack convincingly illuminate the complexity under which actors take on roles as transmitters, mediators or rule-setters when they act upon paths (2007: 180).

1.3 Agency Matters, But When and How?

The importance of actors for path developments was first stressed by Raghu Garud and Peter Karnøe (2001) with their conceptualization of path creation. They pointed out the embeddedness of capable actors who use the discretion of an established path to mindfully deviate and introduce a rivalling arrangement. They suggest that agents act as institutional entrepreneurs who contribute to a new path by generating momentum in favour of a new institutional arrangement (Garud and Karnøe 2001, 2003). One of the means by which actors do so is through framing their environment in fora for "collective sense making" (Garud and Karnøe 2003: 289). While this approach provides a fruitful first step, the conceptual implications for conditions and necessities of actors in later stages of path development are left in the dark. Below we will take up Garud and Karnøe's idea of path

creation and link it to a perspective in which more emphasis is given to competition between competing solutions. This way, not only the establishment of a new path can be addressed, but a conceptualisation of agency throughout all stages of path developments.

One suggestion to analytically deconstruct a path is provided by Sydow, Schreyögg, and Koch (2005) who offer a longitudinal model of increasing return dynamics. In their view of a phase model of path the creation is considered one mode of triggering initial developments. However, the influential role ascribed to actors in the early stages of path evolvement is not consequently conceptualised throughout the entire model: "Such a path is initially either triggered by a contingent event or created intentionally. It relies, from then on, on repetitive organizational or inter-organizational practices governed by positive self-reinforcing feedback, and is in any case reflected in the structures of a social system" (Sydow, Schreyögg, and Koch 2005: 33). It remains unclear how agency and the repetitive practices are related. If actors are relevant throughout the process, no information is given how they might engage effectively in institutional developments.

In an attempt to integrate agency throughout all phases of path developments, gradualistic approaches draw on structuration theory (Windeler 2003). The objective is to take the collective character of agency and organizational embeddedness serious to explain the actor-driven continuation or termination of a given path (Sydow, Windeler, Möllering, and Schubert 2005: 5). This perspective stresses that actors can engage mindfully – but also unintentionally – in the development of paths. What remains unclear, however, is the relevance of self-reinforcing mechanisms and feedback dynamics which are still considered a key element. In the remainders of this paper, we develop this line of thinking further, linking path concepts to a more coherent understanding of agency. One of the relevant

gateways to adequately take into account the interrelatedness of agency and institutional configurations is the concept of alternatives. From our point of view they play an important, yet underrated role in explaining the development of paths.

The phase model of path development (Sydow, Schreyögg, and Koch 2005: 20) discusses primarily the disappearance of alternatives as a key characteristic during the formation and lock-in phases of paths. This in turn leads to a limited range of options to choose from. Such a perspective implies that an organisation's or individual's environment might become less diverse or at least is interpreted as such by the actors in the field. While a limited range of perceived alternative options to choose from might be an empirically phenomenon, it underrates the conceptual value of alternatives. Diminishing options are more than merely an indicator for a less environmental diversity. We argue instead, that the contestation among different actors is precisely about the legitimacy of alternatives. This makes alternatives and how actors are able to make use of them a conceptual category when addressing the question of how paths can be shaped over time. The struggle over the legitimacy and effectiveness of chosen solutions (or rivalling alternatives) is a centrepiece of contestation. Alternatives are relevant because their recognition is a resource for agency which subsequently might becomes distributed as increasing returns.

In recent works alternatives have received some attention to explain institutional change. Schneiberg (2007) has shown empirically that established paths contain possibilities and resources for the transformation and organisation of paths as well as the creation of new organizational forms. He points out that "new paths can emerge *within* extant institutional systems, even in the absence of exogenous shocks" (Schneiberg 2007: 49, emphasis by the author). Furthermore, it underlines the contested degree of interactions in which

alternatives are resources for struggle to bring about (or avoid) change. This might lead to modifications within existing paths or their replacement by installing rivalling alternatives as the source of increasing returns' dynamics. However, to fully assess the potentials and impacts of alternatives, it has to be made clear how and under which conditions actors make use of them. These ideas have been addressed by Crouch and Farrell (2004) who show that dormant resources provide additional sources actors might use to influence paths. Emphasis is given to how and why alternatives unfold, how they are enforced and which role actors play in these processes (cf. Crouch 2005). Taking up the Polya Urn model applied by Arthur, it is shown how the agents' decisions to act are affected by a variety of institutional settings (Crouch/Farrell 2004). Unfortunately, their rigorous analytical extensions lead to new uncertainties due to the highly complex nature of the social processes they derive from Arthur's model.

Instead, we propose to depart from Arthur's Urn model and suggest considering strategic action to explain how agents might take advantage of existing but underrated alternatives or by creating new ones. This approach has another advantage, since it allows to link up to the more recent debates on institutional entrepreneurship in institutional theory which for the first time makes explicit reference to path dependency (Garud et al. 2007: 958). Interestingly, they portrait path dependencies as an element of rigidity which institutional entrepreneurs need to overcome for agency to unfold. We agree that efforts to shape institutions "will not go uncontested" and link these insights to the current state of the art in path dependency as outlined above. The following section emphasises how actor constellations lead to contestation over the supremacy of alternatives, linking their distributive effects to the subsequent configuration of actors. Momentum and strategic actions are used to explain how actors might improve their position vis-à-vis others.

Increasing returns remain a core concept and continue to distinguish paths from mere institutional rigidity. But even if a particular distributive regime displays stability over time, we see no reason to assert equilibrium. In the conclusion we will show why we think it is more appropriate to propose a fragile stability.

2. Conditions and Strategies to Act upon Paths

In order to develop a more elaborated conceptualisation of agency and to point out the actors' impact on paths, in what follows we firstly introduce the concept of actor constellations, namely the analytical distinction between proponents and opponents. Next we will link the different actor groups to the notion of contestation over distinct alternatives within path processes. We will furthermore explore two underrated categories for understanding the role of agency in path dependent processes, that is momentum and benefit distribution. In a third step and in an attempt to integrate agency throughout all phases of path developments we draw upon structuration theory. We seek to develop further gradualistic ideas in the path dependency debate, identifying strategies actors might draw on in contested settings in which path dynamics take place.

Accordingly, we assume that in a given institutional setting, agents are able to take advantage of existing actor constellations in terms of strengthening their position vis-à-vis others (cf. Sydow, Windeler, Möllering, and Schubert 2005 with respect to path shaping). We regard such a separation, over time, an unequal distribution of premises for action (re-) producing an insider-outsider configuration. Throughout this paper, we call the dominating actors the *proponents* of an established institutional setting. There are rivalling groups of actors which do not enjoy the same benefits of a prevailing institutional regime. Those we

call *opponents*, indicating their disadvantaged positions in relation to proponents.[3] This differentiation incorporates two dimensions. On the one hand it is a consequence of the benefits existing self-reinforcing mechanisms bring about. On the other hand the position within an existing actor constellation is a prerequisite to compete over increasing returns and the subsequent distribution of benefits. Initially, the assumption rests on the insight that scarcity of resources is a driving force for actor constellations: "To the extent resources are not evenly distributed or sufficiently expanded, some players in the field will either fail or be motivated to pursue other practices" (Leblebici et al. 1991: 338). Within the logic of path processes, the generation and distribution of social and economic resources is a dynamic and contested matter. In any case, we do not suggest, proposing or opposing a certain institutional trajectory is based on rational cost-benefit analysis. Unintended consequences and paradoxical effects remain important conditions influencing how actors can act upon paths.

Considering conditions and potentials of agency we draw upon the notion of capable and knowledgeable agents provided by Giddens (1984). Accordingly, agency is conceptualized as the active engagement in on-going practices indicating choice as well as reflexive behaviour of actors. It is the interplay between the practical and discursive consciousness of agents which allows the reflexivity and facilitates tracking social interactions by forming "flexible responses to dynamic situations" (Llewellyn 2007: 138). Therefore, shaping patterns of action may create both further constrains as well as unexpected opportunities. In this regard, agency contributes to the establishment or fortification of existing self-

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3   This dichotomy primarily serves analytical purposes. We are fully aware that actor constellations are highly complex and changing over time. The argument of the confrontation between proponents and opponents is a conceptual not an empirical one. Other scholars in organisational theory also refer to such a distinction labeling proponents as core, established or dominant players (cf. Leblebici et al 1991; Djelic/Quack 2003).

reinforcement that allows proponents to embed their interests into institutional structures (cf. Emirbayer and Mische 1998 for a conceptualization of agency as a temporally embedded process of social engagement).

Coming back to the initial question how actors impact on path dynamics, we offer a reformulated perspective concerning the contestation within path processes. This implies that actors are aware of benefits to be gained from their position in a specific actor constellation. Moreover, knowledge becomes a resource implemented in strategic action to pursue certain goals and interests. Looking at proponents, we underline the importance of shared perceptions, mutually related interactions as well as the disposal of resources which allows shaping a particular path. Opponents on the other hand also need to establish shared meanings and multiple actions to build up alternative solutions they might benefit from.

2.1 Applying Momentum as an Analytical Tool

In order to take a closer look at actors' capabilities to intentionally shape path processes we draw on the concept of momentum. Such a notion of momentum is widely accepted in organisation studies (cf. Amburgey et al. 1993; Sydow, Schreyögg, and Koch 2005) as well as strategic management research (Garud and Karnøe 2001, 2003; Jansen 2004). In particular, the role of additional actors to mobilize for momentum is acknowledged (Sydow, Windeler, Möllering, and Schubert 2005: 5). In the case of path creation proposed by Garud and Karnøe (2001), multiple actors generate momentum which in turn enables or constrains the activities of other (Garud and Karnøe 2003: 278). Momentum becomes a source to act as well as an outcome of agency. Important inputs for this dynamic are learning and knowledge accumulation as actors engage in an emergent path (ibid: 280).

Momentum encompasses both the intentional creation but also subsequent perpetuation of paths. The deliberate creation of momentum takes time, requires resources, and sustainable actions of reflexive actors (Sydow, Schreyögg, and Koch 2005 28).

However, this notion of momentum appears to be incomplete, since it remains unclear which role momentum plays at later stages of path development. A more holistic understanding of momentum allows for a more profound understanding of agency in path trajectories. A differentiation seems important to understand two dimensions of momentum: First, we need to comprehend the effects of momentum in terms of reproduction and change. Second, we need to better grasp how momentum is generated, perpetuated or how it may be restricted. In other words, how does strategic action influence the development of momentum?

In order to apply the notion of momentum with respect to actor constellations, we refer to Jansen's (2004) framework of stasis- and change-based momentum. She defines momentum as a *force or energy associated with a moving body* (Morris 1980) and relates actors' involvement to the pursuit of certain aims stressing the role of effort and impetus of action (Jansen 2004: 276). Two types of momentum are introduced: *Stasis-based momentum* describes dynamics associated with persisting or extending current trajectories. In contrast, *change-based momentum* explains dynamics associated with the pursuit of an alternative trajectories leading to change if a current dynamic is redirected, replaced or overcome (ibid: 277). On the one hand, agency is crucial to stabilise ongoing momentum in case of the persistence or extension of a prevailing path. Proponents might draw on a multiplicity of interrelated institutions such as established infrastructures or shared meaning systems to further pursue their goals and interests. On the other hand, to come up with

alternative solutions so as to overcome stasis-based momentum, additional efforts are required to create new scripts and meanings in order to gain the support from others.

To sum up, Jansen's ideal types of momentum provide a first conceptual distinction to analyse agency in path trajectories. Nevertheless, her focus on sources and strategies promoting organizational change leads to underrating the potentials of varying strategies. In contrast to Jansen, we claim that strategies associated with the perpetuation of a dominant action pattern overestimate the restriction of rivalling alternatives. Secondly, she neglects the tension between stasis- and change-based momentum. This relationship needs to be better understood in order to fully grasp the contested nature of the rivalry between prevailing institutions and upcoming alternatives. We suggest overcoming these shortcomings by focusing on the benefit distribution of these dynamics. This paves the way to understand momentum as an accumulation and/or (re)combination of inputs from changing actor constellations. While proponents are essentially the beneficiaries of existing momentum, opponents seek change-based momentum more favourable to them in order to challenge the benefactors.

2.2 Benefit Distribution Shaping Actor Constellations

The embeddedness of actors in path processes establishes agency as a relational category (Garud and Karnøe 2001: 26), in which the distribution of specific returns becomes a conceptual dimension for analysing actor constellations. Their fragile nature questions proposed deterministic understandings. This makes the acquisition and consequential distribution of returns a building-block for path analysis. Basically, we conceptualize benefits as current and future outcomes of path dynamics for actors involved. Since benefits

are not distributed equally, they impact on the actor constellations which make up an existing path. In fact, benefit distribution structure the relationship of proponents and opponents in terms of both shaping actor constellations and providing a premise to self-reinforcing dynamics. This makes actor constellations an additional category for path analysis. They are a precondition for shaping paths and also lead to an uneven distribution of returns. Over time returns might become benefits of which the actors can draw on in future processes.

In practical terms, this can be seen when linking the idea of benefit distribution to existing literature of path theory. Taking Mahoney's (2000) – so far – most encompassing framework of four different explanations of path dependent processes, brings about four different types if returns which impact on the distribution of benefits. In the utilitarian perspective, economic returns are the obvious benefits to be (re-)distributed in self-reinforcing arrangements. Consequently, the other three explanations concentrate on different types of benefits which drive self-reinforcing dynamics.[4] We suggest that the functional explanation focuses on delivering reliability. Power explanations have resource distribution at their centre and legitimacy explanations are based on reputation. This makes the four categories of returns, reliability, resources and reputation central to the distribution of benefits.

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[4]   Accordingly, benefits in the three remaining macro-explanations need to be sensitive to the epistemological assumptions underlying the different theoretical concepts.

2.3. Strategies to Act upon Paths

To take a closer look at action upon paths, we seek to identify *principle* strategies of action. Empirically, these principle strategies are bundles of interrelated strategies on an aggregated level. As such, strategic actions depend on particular institutional settings, either aimed at perpetuating or maintaining an existing path or seeking to establish a challenging alternative. Such a view is in line with practice-theoretical works in social theory (cf. Giddens 1984) as well as strategic management research (cf. Whittington 2006). Practice theorists aim to overcome the dualism between societism (macro level) and individualism (micro level; cf. Schatzki 2005) by defining practices as guidelines enabling agency. Whittington (2006) considers effortful and consequential action as part of strategic action, but at the same time allows for unintended consequences of action (ibid: 619) and recognizes specific institutional contexts.

Along these lines, we define strategies as enacted practices that basically refer to shared norms and procedures as well as to ways of thinking and acting. Skilful actors might use three ways to integrate strategies into their repertoire to act upon paths: reproducing (maintaining current strategies), transferring (adapting existing strategies to new context), and creating and changing (e.g. synthesizing strategies) patterns (cf. Whittington 2006). We assume therefore that actors in path processes position themselves according to their respective position of the dominant actor constellation and with regard to their preferred alternative. If able to, they might make use of momentum as either extending a dominant path or attempting to change the status quo: The former by trying to enhance their strength and restrict rivalling alternatives to retain current benefits (proponents' strategies), the later

by establishing or fostering a rivalling alternative in order to gain potential benefits (opponents' strategy).

Having introduced a dynamic perspective on *principle* strategies, we further advocate combining such a perspective on strategies with Mahoney's typology of reproduction and change (2000: 517). To do so, the mechanisms of institutional reproduction and change are translated into strategies to deal with momentum. Principle strategies (at the macro-level) are therefore put in relation to Mahoney's mechanisms. At a micro level, we understand them as enacted practices guided by the institutional contexts and given actor constellations. To start with the translation of Mahoney's mechanisms of reproduction and change, the first task is to identify strategies that potentially generate increasing returns for utilitarian explanations. This is followed by identifying principle strategies for the other three explanations of complementarity, power and legitimation. Referring to the four different explanation modes we claim each approach focus on a particular benefit distribution scheme which provides self-reinforcing dynamics and also serves as a driving force for future developments. In a second step we provide a more detailed analytical framework of different strategies by integrating the notion of momentum and relating those to the actor constellations model.

Let us first revisit Mahoney's four explanation modes of path processes. The utilitarian explanation draws on the classical concept of path dependency in which actors' strategies would concentrate on the acquisition of increasing returns as benefits. From such a perspective proponents intend to strengthen the current path because this seems to ensure their current benefits. Staying on track outweighs the costs of transforming the status quo (Mahoney 2000: 517). Therefore, developed strengths can be improved by learning effects,

improving coordination regarding the opportunities with cooperating actors as well as increasing adaptive expectation (Arthur 1989). On the opposite, the opponents will most likely deviate from a prevailing arrangement with the intention to generate a more efficient or advanced but in any case a distinct set of alternatives (Beyer 2005: 14) in order to gain potential cost benefits.

The second explanatory mode refers to a functional explanation. We depart from Mahoney's taxonomy and focus on the issue of institutional complementarity or in other words rivalling rarity. In this case reproduction is explained by the degree of institutional integration and linked interactions (Mahoney 2000: 519). Accordingly, we suggest reliability as the benefiting dimension for actors. In terms of our model of actor constellations, proponents of a dominant path rely on and benefit from the functioning of an established system. In addition they may strengthen the path by improving the system's coherence. In contrast, the opponents may seek opportunities to challenge the prevailing benefit distribution by limiting institutional fit or even by creating a completely new regime. Another, maybe more feasible strategy is to focus on changing a small but crucial part of the system that may cause an extensive transformation (Beyer 2005: 19).

Power explanations of self-reinforcing processes assume that actors seek to further enhance their positions to exert dominance over others. However, unlike utilitarian concepts, power-based approaches stress that institutions always distribute cost and benefits unevenly among actors, usually favouring an established elite (Mahoney 2000: 521). In power-centred approaches, resources to secure domination are the main benefits. The advantaged groups receive additional power by expanding their dominance further. Subordinate actors, in contrast, are disadvantaged by the structure of dominance inherent in actor

constellations. Conflicts between elites and subordinate groups indicate that potential for change is built into institutions and subordinate groups may succeed in challenging prevailing arrangements (Mahoney 2000: 523). From our perspective we argue that proponents of a dominant path try to secure their strength by capturing and suppressing alternatives, while opposing actors may challenge the status quo enforcing a rival alternative and/or undermining prevailing power relations.

Finally, in legitimation explanations reputation of actors is the core benefit. Legitimation-based approaches locate institutional reproduction with dominant cognitive frameworks. Values and beliefs provide the basis for subjective evaluations and norms with respect to the appropriateness of institutions and practices (Mahoney 2000: 523). Proponents of a current path increase their reputation by showing or (just) pretending to show accordance with established institutions and practices. Moreover, they might extend a current path by enhancing appropriateness and de-legitimizing upcoming alternatives. Nevertheless, the subjective beliefs and preferences underlying a given institution or path may change (ibid: 525). Thus, opponents are able to challenge prevailing arrangements by promoting additional norms or simply by following alternative cognitive frameworks. The promotion of new ideas and scripts, unintentionally or mindfully, may contribute to new convictions of appropriateness.

In a second step we now integrate the notion of momentum into our analytical grid of principle strategies outlined above. Additionally, we illustrate how the different actor groups might make use of distinct types of momentum. Firstly, we sketch out various proponent-centred strategies to perpetuate momentum. Secondly, we delineate the opponents' domain of strategies focusing on the establishment of change-based momentum.

Lastly and in order to illuminate the tension between both types of momentum we suggest potential strategies to restrict and/or challenge alternatives.[5]

Let us first consider the perpetuation of stasis-based momentum which is a proponent centred activity and geared towards strengthening existing solutions. In the utilitarian perspective, we exemplify strategies to improve strength regarding learning, improving coordination and/or diversifying current competences to correspond with future developments and potential challengers. In the case of maintaining current trajectories, proponents rely on their more favourable position by taking advantage of the prevailing benefit distribution and the self-reinforcing dynamics to drive a preferred solution. Secondly, referring to a complementary explanation, strengthening coherence is a primary strategy to confirm an established path trajectory. Thirdly, with regard to power-centred approaches, we propose that proponents strive to strategically secure their domination vis-à-vis others to receive additional power and fortify their predominant position. Lastly, from a legitimation-based perspective, strategic action focuses to enhance the appropriateness of an established solution or given path.

In contrast to the proponent-centred perspective to benefit from established stasis-based momentum, opposing actors need to generate change-based momentum in order to challenge existing trajectories by enhancing alternative solutions. Referring again to the utilitarian explanation, opponents might generate change-based momentum through developing different, more efficient options. From a complementarities' perspective, the creation of a completely new regime – or perhaps more feasible the establishment of new

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[5] By exemplifying strategies to generate momentum we concentrate on activities to create radical new solutions. Nevertheless we also consider strategies to extend current trajectories in terms of modifying established solutions by proponents. By being aware of this analytical distinction between incremental and radical change we argue that in practice it is an empirical question on how much change is taking place.

building blocks – triggers momentum for a broader transformation. In power-centred explanations, opposing actors may seek to challenge the status quo with its unequal benefit distribution through enforcing a rivalling alternative and/or undermining prevailing power relations. In terms of legitimation approaches, opponents are able to challenge prevailing configurations by advancing new ideas and norms or try to set up alternative cognitive frameworks.

Even thought generating change-based momentum is very suitable for opponents, it has to be acknowledged, that proponents might also engage in generating new momentum to transpose their beneficiary position into the future. The strategies to modify or extend established solutions is considered a process of incremental change The transfer of existing arrangements to new contexts (in terms of utilitarian explanations), the adjustment of a working system (with respect to complementary approaches), the power-based enlargement of an established alternative to a wider scope of employment, and the re-interpretation of norms and ideas leading to a new understanding of an existing solution (legitimation explanations) are proponents' strategies to generate momentum for change which secures their further position.

In addition, there are potential tensions between different types of momentum. From the proponents' point of view the core idea would be to restrict changed-based momentum, above all by restricting rivalling alternatives. However, their interest in maintaining the benefit distribution scheme they benefit from might also make them advocates of change. In that case, different notions of change which rely on contrasting momentum compete with each other. Again referring to the four explanation modes, this leads to a variety of strategic responses. In utilitarian accounts, integrating competing alternatives as one strategy

proponents could take. With regard to complementarity-focused explanations, linking up new alternatives to an established system is a way to maintain or even enhance coherence. The power-based explanation could lead a group or elite to enhance its resources to capture and/or suppress alternatives. Legitimation strategies facilitate restricting momentum by either adopting or de-legitimizing and excluding rivalling alternatives.

Nevertheless, following the dialectic relationship between proponents and opponents, the latter are also in a position to generate momentum. Therefore, the following *principal* opponents' strategies may be identified to counter proponents' actions. To start with utilitarian accounts, purposely being different and building up rivalling alternatives might offset an established path. In complementarity-based explanations we suggest dismantling prevalent structure as a probable way of strategically strive against the predominant system. In terms of power-centred explanations, the effective resistance to dominant solutions by a subordinate group may give rise to new momentum. In terms of strategies to alternate reputation, opponents might seek to de-legitimize views deemed appropriate to upset the perpetuation of proponents' predominance.

The different modes derived from an analytical perspective of how to translate the abstract mechanisms of reproduction and change into actor-centred strategies and practices are only preliminary considerations. More work will be needed, in particular directing more attention to the role and conditions of opponents and to the tension between momentum types leading to contradicting dynamics in path developments.

3. Conclusion: Fragile Stability and Institutional Reproduction and Change

Linking agency to the dynamics of institutional paths is an essential yet challenging task. It needs to regard the specifics of path dynamics over time without resulting in an over deterministic interpretation of institutional reproduction. In essence, the contribution of this paper is to conceptually link increasing returns to the involvement of agents by particularly focusing on strategic engagement. As outlined above, we suggest looking for a two-way relationship. Established increasing returns produce benefits which become unevenly distributed between proponents and opponents of a given path. This further enhances actor constellations if and when given dynamics are continued. At the same time, increasing returns become the object of agents because of the benefits they generate. This makes increasing returns vulnerable and introduces fragility which is fuelled by the contestation over resources. One of the key venues to bring about change is the activation or constitution of alternatives turning dormant resources into relevant benefits with distributive character.

Even though tension has been considered in more traditional path concepts (cf. Mahoney 2001; Pierson 2004) the active engagement of agents has not been brought into full light. Much of the conceptual debates on path development have centred on identifying mechanisms of reproduction and change (Arthur 1989; Mahoney 2000; Sydow et al. 2005). Despite the fact that they are core to path development, it is not sufficient to grasp agency in its entirety. Instead, further research should focus on the linkage of mechanisms of self-reinforcement and the potentials of actors' involvement. Such a step would also contribute to highlighting not the mechanistic understanding of path dynamics but a perspective open to tension amongst different influences and contestation. Just as increasing returns, mechanisms are products and premises of agency.

The notion of contestation with respect to actor constellations and benefit distribution as well as the accessibility of alternatives thus becomes a central category of the analysis of paths. Far from being limited to the initial phases of the formation of paths, the struggles agents engage in are relevant throughout the entire developments. This does not rule out lock-in effects as observed in some of the early works of path dependency. A coherent inclusion of agency, however, highlights another outcome: the precarious nature of stability. Instead of becoming increasingly crusted or inert over time, as some works suggest, we argue that dominant paths are characterised by self-reinforcing dynamics and feedback mechanisms which are better judged by their distributive nature. It is thus the proponents' advantaged position, in terms of benefit distribution and their strength to enhance a current trajectory that might lead to stabilisation over time. Nevertheless, the suspense inherent to paths in terms of opposing actor groups, rivalling alternatives and the distributive character of increasing returns makes them more fragile than suggested by many approaches.

Conceptually, we link the fragile nature of what is often assumed to be persistent path developments to alternatives. They are decisive resources with the potential to be strategically used for reproduction or change of institutions. A plain association of proponents with an interest in merely limiting competing alternatives on the one hand and opponents who are eager to create of activate rivalling ones on the other hand appears overly simplistic. Empirically, however, it could be a worthwhile starting point for further analysis. Such investigations are likely to show a wide variety of ways actors engage in interaction and practices in order to enhance the acceptability and legitimacy of alternatives they can draw on as resources. This allows to further developing an approach so far underdeveloped in path dependency debates. It provides a possibility to coherently integrate

agents by looking at actor constellations, by actors' attempts to shape momentum preferable to them and the distribution of benefits obtained from existing increasing returns. At the same time, conceptualising how actors act upon paths underlines the fragile nature of path development and brings the continuous formation of paths into the spotlight.

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