

The Exploration Phase of Replication Strategies: The Role of Autonomous Action for Reverse Knowledge Flows

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Replication strategies rely on the exploration of new knowledge. An important source of new knowledge is the transfer of unit level experience to HQ, a process referred to as reverse knowledge flows. Such knowledge flows are fraught with difficulty as formal mechanisms often break down due to diverging business interests of unit and HQ managers. This study brings together research on knowledge stickiness and autonomous action to provide a new avenue for understanding RKF after formal mechanisms break down. By drawing on an exploratory study of a franchise network, we provide an insight into how autonomous action reduces initiation stickiness, but potentially increases implementation stickiness. Our analysis suggests that the role of autonomous action for reverse knowledge flows is moderated by unit managers' resource expectations that emerge as a result of autonomous action. Exploring the interplay of autonomous action and knowledge stickiness provides new explanatory means for understanding reverse knowledge flows in replicator organizations.

Keywords: *Replication, exploration, exploitation, knowledge transfer, stickiness, autonomous action*

Introduction

Replicator organizations focus on the close copying of a business format, i.e. a set of value creating knowledge and capabilities, across organizational units (Winter, 1995; Szulanski and Winter, 2002; Filippini *et al.*, 2012; Winter and Szulanski, 2001). Examples of firms that follow such a strategy are IKEA with its approach to internationalization (Jonsson and Foss, 2011) or Intel's way of producing processors of high accuracy (McDonald, 1998). A crucial part of replication strategies is to continually explore new knowledge (Winter and Szulanski, 2001; Zollo and Winter, 2002). Such exploration requires knowledge to be transferred from the unit level to HQ; a process referred to as *reverse knowledge flows* (RKF) (Jonsson and Foss, 2011; Ambos *et al.*, 2006; Mudambi *et al.*, 2014). While 'knowledge transfer' has received substantial research attention (Argote and Ingram, 2000; Aalbers *et al.*, 2014), research on RKF is still in its infancy. This applies to research on RKF in MNEs more generally (Ambos *et al.*, 2006; Håkanson and Nobel, 2000; Mudambi *et al.*, 2014) but also within replicator organizations more specifically (Jonsson and Foss, 2011).

Prior research only provides a partial view of RKF by focussing on 'formal processes' of knowledge transfer from replicates to HQ (Jonsson and Foss, 2011). Examples include forums for best practice sharing, process improvement initiatives, or regular reporting procedures (Jonsson and Foss, 2011; Crossan and Berdrow, 2003). However, such knowledge flows are 'sticky' (Szulanski, 1996) and fraught with difficulty. Indeed, what some units regard as valuable might not be considered worthwhile replicating by HQ (Szulanski and Jensen, 2008; Carlile, 2004). Thus, the political context of organizations, fuelled by different managerial interests and interpretations, constitutes a substantial challenge for RKF and innovation in replicator organizations (Carlile, 2004, 2002; Szulanski, 1996, 2000). This shifts salience to actors' autonomous actions and emergent forms of RKF (Friesl and Larty, 2013; Carlile, 2004) that aim to circumvent knowledge stickiness. However, extant research

has neither addressed the issue of knowledge stickiness in the context of RKF nor do we have an in-depth understanding of replicates' role in reducing stickiness through autonomous actions. Thus, this paper addresses the following research question: How do autonomous actions reduce knowledge stickiness to facilitate RKF in replicator organizations?

In order to address this research question we follow a qualitative and explorative, embedded case design (Yin, 2002). We chose a franchising company (Alpha) as a typical replicator organization (Szulanski and Jensen, 2008; Winter *et al.*, 2013). Our analysis draws on four embedded episodes of RKF within Alpha. Our explorative analysis reveals that the relationship between autonomous action and knowledge stickiness is a double edged sword. Although autonomous actions overcome 'initiation' stickiness, the resource expenditure of those actions creates expectations of compensation which, in turn, becomes a source of 'implementation' stickiness. Furthermore, a predominance of unit level resourcing encourages lateral knowledge flows (LKF) among franchisees which results in pockets of diverging practice.

The findings of this paper contribute to the literature on replicator organizations by providing new insights into emergent forms of RKF. By spelling out how autonomous action reduces knowledge stickiness, we complement existing research emphasizing the role formal processes of RKF (Winter and Szulanski, 2001; Jonsson and Foss, 2011) and, as a result, provide a more nuanced understanding of how replicator organizations evolve. However, focusing on autonomous action also provides new insights into the reasons for deviation from a business format; a core theme in replication research. While prior research theorizes deviation as inappropriate adaptation to local contexts (Szulanski and Jensen, 2008; Winter *et al.*, 2012) or the mindless drift of routines (Cohen and Bacdayan, 1994; Friesl and Larty, 2013) we show that it can be a side effect of attempted RKF. Finally, we contribute to the emerging debate on RKF more widely (Ambos *et al.*, 2006; Mudambi *et al.*, 2014) by giving

insights into the types of autonomous actions involved in knowledge flows unsanctioned by HQ.

The exploration phase of replication strategies: Literature review and conceptual framework

Replication strategies: Theoretical background

Research on replication is largely based on the knowledge based theory of the firm (KBT). KBT considers knowledge a crucial resource of the firm and a source of competitive advantage (Grant, 1996; Eisenhardt and Santos, 2002). This makes the use of existing knowledge and the creation of new knowledge key value creating activities (March, 1991). Apart from replication strategies, KBT has been used in a variety of contexts such as knowledge transfer (Argote and Ingram, 2000), organizational learning (Huber, 1991) and innovation (Bierly and Chakrabarti, 1996; DeCarolis and Deeds, 1999) which creates a rich conceptual underpinning for this paper. One particular offspring of this debate is a growing body of research focusing on the importance of RKF, i.e. knowledge flows from units to the centre (Jonsson and Foss, 2011; Ambos *et al.*, 2006; Mudambi *et al.*, 2014).

RKF as a form of exploration forms the theoretical foundation to study innovation in replicator organizations. Indeed, while a firm's knowledge base forms the basis for replication, it is not readily available at the outset and it requires continual exploration and improvement. It develops and evolves by incorporating knowledge created by both HQ and, more importantly for this paper, at the unit level (Winter and Szulanski, 2001; Schleimer *et al.*, 2014). For instance, this may include production techniques (Bradach, 1998) or knowledge about marketing and product offerings (Jonsson and Foss, 2011). Yet, in order for unit level knowledge to become part of a firms' replication strategy, it requires RKF. This is contingent on unit level knowledge to be superior to existing aspects of a replication strategy but not idiosyncratic to the unit (Szulanski and Winter, 2002; Winter, 1995). In the context of

HQ-subsidary relationships prior research has started to unpack a number of factors that influence the initiation of RKF such as the characteristics of knowledge transferred (Håkanson and Nobel, 2000), the characteristics of the subsidiary itself, such as the very ability and willingness to transfer (Mudambi *et al.*, 2014) as well as the benefits of RKF (Ambos *et al.*, 2006; Rabbiosi and Santangelo, 2013).

Replicator organizations typically have formal mechanisms in place to tap into local knowledge whilst maintaining control over what is replicated (Winter and Szulanski, 2001; Cohen *et al.*, 1996). It is therefore not surprising that prior research has emphasized the role of these processes for RKF (Andersson *et al.*, 2015). For instance, based on in-depth data from IKEA, Jonsson and Foss (2011) highlight how the formal processes for unit manager feedback allowed them to question existing knowledge and influence IKEAs replication strategy. Yet, prior research also highlights that such formal processes of knowledge transfer are likely to fail which raises questions about emergent and informal forms of RKF (Carlile, 2004). In the following section we bring together two areas of literature that explain why formal processes of knowledge transfer may fail and how actors might respond: (1) research on knowledge stickiness and (2) the notion of autonomous actions in strategy process research.

Reverse knowledge flows, knowledge stickiness and autonomous action

The initiation of RKF depends on the agreement of HQ and unit managers that there is indeed a gap or an issue in the existing business format of the firm that can be addressed by making unit level knowledge available across the organization (Fichter *et al.*, 2011). Yet, this process is far from straightforward given the uncertainty and cost involved in making changes happen (Winter and Szulanski, 2001; Szulanski, 1996; Nelson and Winter, 1982). These barriers to knowledge transfer are theorized by using the concept of ‘knowledge stickiness’.

Knowledge stickiness: The term stickiness is often associated with von Hippel's work on the 'costs' of transferring knowledge to facilitate problem solving (von Hippel, 1994) or Szulanski's (1996, 2000) work on difficulties involved in horizontal, intra-organizational best-practice transfer. These two pieces of work highlight how knowledge becomes *sticky* when it requires additional effort to transfer. This is might be due to the diverging interests and interpretations of actors (Regnér, 2003), which can lead to a breakdown of formal processes of knowledge transfer (Carlile, 2004, 2002). While Szulanski's initial study has emphasized horizontal, intra-organizational relationships, the concept of knowledge stickiness has since been extended to a wide range of contexts including vertical relationships within firms (Chang and Smale, 2013; Chang *et al.*, 2012; Fichter *et al.*, 2011; King, 1999), vertical relationships across firms (Xue and Field, 2008) or the diffusion of knowledge at the industry level (Hoetker and Agarwal, 2007).

Despite the different contexts in which knowledge stickiness has been applied, there are a number of overarching arguments that explain why knowledge stickiness occurs. While not constituting an exhaustive list, these arguments broadly relate to the characteristics of the knowledge transferred, and the relationship between sender and receiver (Sackmann and Friesl, 2007; Hippel von, 1994). Early work focused on how knowledge may be tacit (Polanyi, 1964) and thus difficult to verbalize and communicate (Nonaka and Takeuchi, 1995; Carlile, 2004, 2002; Styhre, 2004). More recently, the term causal ambiguity has been used to highlight the difficulties faced by decision makers in understanding the potential performance implications of unit level knowledge (Lippmann and Rumelt, 1982; King and Zeithaml, 2001; Ambrosini and Bowman, 2009). The extent to which stickiness becomes a problem for knowledge transfer is also influenced by the relationship between sender and receiver (Squire *et al.*, 2009). For example, this may be affected by the formal governance structures set up to facilitate knowledge transfer (e.g. Foss *et al.*, 2010; Rabbiosi and

Santangelo, 2013). Moreover, stickiness may arise if actors find it difficult to prove the efficacy and usefulness of knowledge and if the sending unit is perceived as being trustworthy and reliable (Szulanski, 1996; Friesl *et al.*, 2011).

Prior research also shows that the influence of stickiness might differ depending on the kind or stage of knowledge transfer (Hansen *et al.*, 2005; Hurt and Hurt, 2005). Szulanski (1996) differentiated between the initiation of transfer at the unit level and the implementation of knowledge across units. Initiation requires achieving an agreement on the appropriateness of new unit level knowledge (Carlile, 2004). Implementation, on the other hand, requires an agreement on the resourcing of the transfer process. Indeed, von Hippel (1994) also pointed to the importance of resources to facilitate knowledge transfer. Differentiating between stickiness in the initiation stage and in the implementation of knowledge transfer acknowledges that RKF creates a range of managerial challenges. In this paper, these challenges can be exasperated when units perceive there to be superior knowledge at the unit level which is not acknowledged by HQ. Prior research suggests that such situations often trigger unit level political or autonomous action (Carlile, 2004).

Autonomous action: Research on knowledge transfer argues that in cases where formal processes break down, the initiation of RKF requires ad-hoc activities (Szulanski, 1996) and “practical and political effort” (Carlile, 2004, 560) by unit managers in order to achieve common interests and shared interpretations of the value of unit level knowledge. Drawing on Burgelman (1983), we use the term ‘autonomous actions’ as an umbrella term (Floyd *et al.*, 2011) for such informal, practical and political effort that is targeted at overcoming knowledge stickiness to make RKF possible. The notion of autonomous action also emphasizes that those actions originate at the unit level and are not part of the formal organizational processes (Pandza, 2011). Thus, when unit managers have vested interests in new ideas, which are unsuccessfully transferred in the formal feedback process, unit

managers may engage in autonomous actions aimed at overcoming HQ resistance (Carlile, 2004). However, the ways in which unit managers are able to overcome knowledge stickiness through autonomous actions have not been subject to explicit research attention. Therefore, as stated above, this paper addresses the following research question: How do autonomous actions reduce knowledge stickiness to facilitate RKF in replicator organizations?

Methodology

We use a qualitative, exploratory case design (Yin, 2009; Eisenhardt, 1989; Siggelkow, 2007). Such designs are particularly useful to address the ‘how’ and ‘why’ questions in management research (Yin, 2009) and have been used in prior studies on replication strategies (e.g. Güttel *et al.*, 2012; Jensen and Szulanski, 2007). Case study research is justified as it provides access to the “multi-faceted, contextually situated interactions” that are required to address the research question of this paper (Birkinshaw *et al.*, 2011, 576). This paper is based on four ‘embedded’ cases of RKF. Embedded case designs improve the validity of findings by combining multiple events within the context of a single ‘case company’ that provide different insights into the same phenomenon (Yin, 2009). Such designs are frequently used in recent management research (e.g. Smets *et al.*, 2012; Joseph and Ocasio, 2012; Detert and Treviño, 2010). Our analysis follows an abductive approach by drawing on existing concepts related to knowledge stickiness and autonomous action while also building on inductive findings from the case (Ketokivi and Mantere, 2010).

Research context

Franchising organizations are a typical empirical setting for research on replication (Winter and Szulanski, 2001; Szulanski and Jensen, 2008; Winter *et al.*, 2013). The replication of a ‘proven’ business format is at the heart of these organizations (Winter *et al.*, 2013; Cox and Mason, 2007). Moreover, franchise organizations are also characterized by clearly

demarcated boundaries between HQ and franchises with regard to explorative activities. The franchise literature already discusses the difficulty of balancing replication and innovation (El Akremi *et al.*, 2011; Stanworth *et al.*, 1996). These tensions make franchise organizations an ideal context in which to explore how units are able to achieve RKF.

We draw on data from a franchise company, called Alpha. Alpha has over fifty outlets across the UK and the Republic of Ireland. Bob, the Managing Director (MD), has worked for over 30 years with various franchise organizations, including large multi-nationals. Alpha operates in a business-to-business market, selling marketing products and related services. Its target customers are companies in the finance, education and retail sectors. Franchisees usually specialise in one or two of these sectors. Alpha's replication strategy is based on implementing a number of key processes for marketing, sales and service delivery that are crucial for the firm's customer centric approach. In order to facilitate replication of these processes across franchised outlets, Alpha created comprehensive operations manuals provided to all franchisees.

Alpha's outlets are owned by franchisees. To tap into ideas generated by franchisees, Alpha established two formal processes for RKF: Regular one-to-one meetings between franchisees and the MD in which franchisees are able to discuss new knowledge at the unit level that might be beneficial across the organization and regular sessions dedicated to new ideas at the quarterly meetings. Very early in our work with Alpha we became aware of several ideas which had been turned down by the MD, but which franchisees continued to pursue. Such activities indicated that on occasion, feeding back new knowledge required much more effort than the straight forward formal processes would suggest. These activities and the political effort by franchisees became the focus of this research.

Data collection and analysis

Our analysis draws on interviews, informal conversations and observations of company meetings. Semi-structured interviews with 20 franchisees played a key role in data collection for this paper. Interviews lasted between 30 and 120 minutes and were recorded and transcribed verbatim. The franchisees interviewed had between 3 and 10 years' experience, with an average of 4.5 years. This paper is part of a larger study on replication strategies. We already had substantial insight into the firm before starting data collection. This helped to build rapport and trust with interviewees. Each franchisee had purchased the rights to operate their own regional outlet under the Alpha brand and each was actively involved in the day-to-day management of those outlets. Interviewees also had reporting responsibilities to HQ and were thus involved in formal processes of RKF. We also conducted eight interviews with staff from HQ, which included the MD (2 interviews), the Marketing Manager (2 interviews) and two interviews each with two Business Development Managers. Moreover, we also draw on a large number of informal conversations with the MD from which we took notes. Drawing on data from multiple sources, as well as questioning different franchisees and the MD about the same areas, also helped to increase the validity of our findings.

Key interview questions asked were: What are the main challenges that you face in your business and how have you overcome them? Have you ever fed back any new ideas to HQ? Have you or other franchisees been able to influence the organization, particularly the processes, products and services? What has been your experience of the process of franchisees feeding back ideas to HQ? What are the challenges that you faced in feeding back ideas and how did you overcome them? Within the interviews we probed for further information in order to further explore the examples and experiences of franchisees. In addition, we triangulated franchisees' accounts by analysing the views of several franchisees involved in RKF at Alpha. To further strengthen the validity of our findings, we also

carefully explored the different examples of franchisees' influence over the firm's replication strategy with members of Alpha HQ.

Our analysis of the data followed three stages. The first stage of analysis was to identify episodes where franchisees attempted to initiate RKF, but faced resistance from HQ. We initially identified eight episodes (which we label 'issue episodes'). For three of those episodes we did not have substantive data to trace the course of actions, and were not able to verify the data across franchisees / HQ. We therefore focused our attention on five issue episodes and compiled a list of key events.

Second, we gathered available data on each of the five episodes. By tracing events related to those cases and by triangulating data from across observations from meetings as well as interviews with multiple franchisees and members of franchise HQ we increased internal validity of our analysis (Filippini *et al.*, 2012; Yin, 2009). Based on Miles and Huberman's (1984) categorization analysis we identified themes regarding activities and patterns that allowed franchisees to feed back ideas to HQ. We used existing concepts such as initiation and implementation stickiness and autonomous action as reference points during inductive coding. In order to increase reliability, both authors were involved in the coding of data (Nemeth *et al.*, 2001). Through several iterations of coding we identified different patterns of RKF that occur when formal processes for RKF break down. In particular, we highlight the importance of franchisee autonomous action (probing, framing and coercive actions) as well as resourcing agreements between HQ and franchisees that provides a means for overcoming both initiation and implementation stickiness.

In the third stage we studied the interplay of autonomous action, knowledge stickiness and resourcing across all episodes which enabled us to unpack their combined impact on RKF (see Table 6). In order to demonstrate interpretative rigour we have included Tables 2-5 for each of the episodes, which outline franchisees' autonomous actions as well as both unit and

HQ resourcing of RKF. The tables include themes developed from the data, descriptions of those themes as well as illustrative quotes (Guba and Lincoln, 2008). Two of the episodes followed identical processes, actions and resourcing. For reasons of brevity we decided to eliminate one of these episodes as it did not provide any additional insights. Below, we therefore present four episodes.

Reverse knowledge flows in Alpha

Below we describe each episode by specifying the underlying issue, the autonomous actions of franchisees aimed at overcoming knowledge stickiness, and the consequences of those actions for achieving RKF. Each of these episodes occurred over a number of months after first being raised with HQ. Table 1 provides an overview of all issue episodes.

TABLE 1

Episode A: New Training Programmes

The issue: Alpha provides franchisees with detailed curricula and accompanying materials for several standardised training programmes that franchisees deliver to junior managers in organizations. Franchisees are responsible for selling these programmes and recruiting professional trainers who follow strict guidelines for programme delivery. This particular issue arose at a quarterly meeting when, Mary, the Alpha franchisee for Region A, asked Bob whether it would be possible for HQ to develop new training programmes to target senior managers at existing clients; an opportunity for cross-selling. Bob explained that this would be an unfamiliar market and thus would require significant investment in skills and knowledge. Although he acknowledged the logic behind the argument, he emphasised that Alpha would not enter this market. Bob's response was met with resistance from franchisees who saw opportunity in the executive market. This led to a lengthy discussion during which

Bob defended the organization's stance and the importance of franchisees focusing their efforts on the existing service portfolio. The unfolding of the episode is summarized in Table 2.

TABLE 2

Autonomous actions and resourcing: Discussions amongst franchisees continued outside of the meeting. David (Region B), Michael (Region C) and Sue (Region D) were particularly keen on Mary's idea as they considered it a business opportunity in their respective regions. This group of franchisees pointed out that they had been working together for "*quite some time*" (Sue) and had put increasing pressure on Bob to introduce new programmes. Yet, according to Sue, Bob had remained adamant throughout the process that there would be no changes to the programmes offered by Alpha. In frustration, and because of the potential benefit of new programmes for their regional outlets, this group of franchisees had begun expending their own time and resources to develop their own new programmes. Mary had been researching Alpha's competitors. David told us how he and Michael had visited an exhibition and spoke with a number of potential suppliers of new training programmes:

Myself and Michael went to the [training programme exhibition] last January [...], we met the people from [Company X] [...] they develop training programmes for organizations such as Alpha and we had a long chat with the CEO.

In so doing, David and Michael were becoming knowledgeable on the different types of programmes already on offer for their senior managers. Sue mentioned in an earlier interview about how she was starting an evening part-time qualification in training which covered programmes for both junior and senior managers within organizations:

[...] I'm going to be a bit more demanding because I think there will be things I will see from a more experienced perspective that we could do [...] there is a gap here which we could fill as a company.

Over a period of 12 months, these four franchisees had acquired significant knowledge about the design of new training programmes for the new market. This group of franchisees began sharing their ideas, as Sue stated:

[...] we would get on the phone and say 'I'm looking at this', 'oh, I've done some work on that, I'll send you what I've done, you send me what you've done and we'll put it together'.

As these franchisees progressed with their ideas, they developed new training programmes and were successful in creating new sales. When Bob heard about their successes and that programmes had now been developed, he started to see the potential for rolling these programmes out across the organization. Bob asked the group of franchisees to share their ideas with the programme development team at HQ so they could roll it out across the organization.

Consequences: Having invested considerable time and resources, the franchisees were now reluctant to allow Bob to simply take their new programmes and roll them out to other franchisees. As Sue explained:

I know this does not sound very team playing but why should I spend my time that costs money and effort, to develop a new training programme and then disseminate it out to the rest of the franchisees for nothing? Why should I do that? We worked hard.

As Sue states, these franchisees considered their resource expenditure to be beyond an acceptable threshold and wanted to be compensated by HQ before they would be willing to share the new programmes. Instead, this group of franchisees offered their services to Bob and HQ for writing new programmes. As Sue told us, her response to Bob had been:

Why don't I start writing this for you? I'm not writing it for you for nothing, I will do consultation for you and I will write bespoke programmes for you.

Alpha HQ, however, refused to pay franchisees for the development of new training programmes. Unbeknown to Bob, this group of franchisees continued developing and sharing new training programmes which they were delivering within their regions. As David stated,

What we're all doing individually is building up our own training programme library.

Michael similarly added his feelings on what was happening,

We know it's absurd and we know it's ludicrous [...] but what else can we do?

At the time that we left the study, Alpha HQ had not been able to resolve the issue and this group of franchisees were continuing to provide programmes to senior managers within their client organizations.

Episode B: New processes for customer account management through the web site

The issue: Alpha's web site comprises an overview of Alpha's product and service offerings. Franchisees were able to adapt their local web sites to provide additional information, but had no control over the content and functionality of the main portal. The main web portal provided only an overview of the Alpha organization. If potential customers wanted further information, they were directed to one of Alpha's 'regional representatives' (i.e. franchisees). Janet, the Alpha franchisee for Region E, first raised an issue about the limited functionality of the web site and argued for the need for online sales capability. Bob, however, believed that the creation of a new web site with additional sales functionality would challenge the existing sales approach based on interpersonal relationships. At a franchisee meeting he made it clear that Alpha would not become an online business. Indeed, Bob's core message to franchisees was that being an Alpha franchisee "*is about face-to-face communication [...] it's about being in there in front of the customer and talking to them*".

Franchisees, on the other hand, considered online sales functionality crucial for business growth. This remained an ongoing issue within Alpha and franchisees were concerned about Bob's resistance to make changes. It took franchisees "*a year and a half, several of us, to say 'we need it changing, we need it updating'*" (Janet, Alpha Franchisee for Region E) before any progress was made (see Table 3).

TABLE 3

Autonomous actions and resourcing: It was only when a group of franchisees decided that they would campaign further for a new web site that things started to change. This group of franchisees formed an unofficial working group where they conducted research into competitor web sites and sought feedback from existing clients on the functionality of the Alpha web site. This research revealed that although many competitors were offering online services, it was the additional functionality that Alpha's customers were looking for to enable them to access their accounts and to track their purchases. The turning point came when Matthew, an Alpha franchisee for Region F, approached Bob with a suggestion that they could work together on further understanding the web site issue and to identify the priorities for Alpha. Matthew had been working with other franchisees, as he stated, "*two or three of us met, discussed this, we found that we were in agreement*". It was after this and through collating all the available research that he then took the initiative to approach Bob. But, rather than raising the issue, Matthew approached it in a more constructive way:

We approached the central franchise business to say 'this is a concern of ours, we would like to work with you' [...] the central business was very receptive [...] and was keen to work with us to understand what we thought was required and where we should prioritise the spend [sic!].

Matthew and two other franchisees worked closely with Bob to plan the investment in a new web site. After much consultation and further research from franchisees, Bob agreed to provide resources for the development of new customer account management processes that would work through a new web site using the team of franchisees to help define the requirements and to play a role in testing out the new processes that were integrated into the new web site. As Matthew stated:

When they redesigned the website they did get myself and two other franchisees to look it. We saw the test pages and went through it and told them what we thought to it and how easy was it to use it, etc.

Consequences: Alpha, together with help from a small group of franchisees, developed new processes for customer account management that enabled franchisees and their customers to use the additional functionality of the web site. Those new processes were rolled out across the organization so that all of Alpha's franchisees and customers were able to use the new web site functionality. Franchisees, on the whole, were happy with the new processes.

Episode C: New processes for communicating after-sales information

The issue: Alpha focused heavily on providing exceptional customer service. As part of this, Alpha required franchisees to send out an after-sales pack to clients which detailed the products sold and potential complementary products they may find interesting. The existing processes required franchisees to print this information and to then send that to their clients in an Alpha branded folder (which franchisees purchased from HQ). John, the Alpha franchisee for Region G, after much discussion with other regional franchisees, was the first to raise the issue of the excessive costs of printing and purchasing folders at a quarterly meeting. John requested that franchisees be allowed to revise the existing processes and to send the after-sales information by e-mail instead, yet the reaction from the MD was immediate, as explained by John:

We just said in passing at a quarterly meeting, 'we are thinking about sending [the information] electronically' and he was down on us straight away 'no, you're not doing that; you can't do that!' There was no discussion; it was just 'you're not doing it!'

HQ remained adamant that the existing processes should be followed and that the information should be printed and posted, as it played an important part of the sales process which distinguished Alpha from competitors and taking this online would break with what were deemed to be hitherto successful practices (see Table 4).

TABLE 4

Autonomous actions and resourcing: Mike, the franchisee for Region H, believed that part of the problem was that Bob could not visualise what the new information pack might look like if it was communicated via e-mail. Mike knew that he could design an electronic information pack that looked exactly like the paper-based version and included Alpha branding. Mike therefore spent considerable time designing new processes that would enable the use of an e-mail based system for sending the pack; he had carefully thought through the details and ensured the pack was in line with corporate branding and looked professional when received by clients. The new processes would be less costly and would enable franchises to get the information to clients more quickly. Upon presenting his idea to Bob, the reaction was the same. Bob rejected the idea on the basis that Alpha's existing processes focused on customer service and that as part of that franchisees should always send a printed Alpha after-sales pack. Subsequently, Mike shared his idea with other franchisees who immediately understood how these new processes would save valuable time and resources. Bob, knowing that other franchisees had seen Mike's idea asked all franchisees in an e-mail and at the next quarterly meeting to continue using the existing paper-based system, despite much resistance from franchisees.

Consequence: Franchisees were unable to reach an agreement with HQ, yet they already had a solution which was more cost-effective and less time consuming within their regions. When we spoke to Mike, at a later stage, he replied,

We just went off and emailed it! As far as we were concerned it was the same information going across.

We also asked him whether he was the only one doing so, his reply confirmed our suspicions:

They've done it as well, they've emailed it [...] We can now do everything six weeks in advance, we can say 'email this on this date, this on that date'. I can set up all the attachments, set up all the dates, and I know that as soon as a product is delivered, that night the client receives an email.

From our interviews with franchisees, we knew that Mike's new e-mail system was being used by a significant number of franchisees, unbeknown to HQ.

Episode D: New product X

Issue: Steve, the franchisee for Region J, raised an opportunity with Bob for a new product idea relating to the online sales of a new 'Product X'. Steve had conducted initial research into the product and was convinced that all franchisees could considerably increase their regional turnover. As the provision of online capabilities was already an ongoing issue within Alpha, when Steve presented his ideas to Bob, Bob responded by reiterating his same concerns: the provision of online capabilities was not in line with Alpha's current processes for sales and marketing (see Table 5).

TABLE 5

Autonomous actions and resourcing: Having decided that the online distribution of Product X might not fit into Alpha's portfolio, Steve instead focused on Product X itself. Despite the disagreement with HQ, Steve still believed in the potential of Product X for Alpha as a whole and conducted further research, including an analysis of customers, competitors and suppliers. Over a period of six months, which included numerous visits to potential suppliers, Steve was able to collate enough information to convince Bob that there was a profitable market for Product X and that it would fit comfortably with Alpha's product portfolio. Steve agreed to spend his own time and resources in piloting the idea with an understanding that if this was successful Steve would then play a role in helping to roll out

the product to other franchisees. During an interview with Steve, we sensed that he was excited by the project:

I just want to test it and get it going first and I will be the first one in our franchise that does [Product X].

However, we also sensed at times some concern over the risk. As although he had pointed out to Bob, that there was little investment requirement from HQ, it did mean that there would be considerable investment by franchisees. In addition, he was aware of the considerable investment he was making in order to test Product X:

[...] at the same time it's going to be scary because I'm picking out 1400sq-foot of business space that's going to come with overheads, insurance and rates, and then I'll need someone to help with the distribution.

Although compensation from within the franchise was considered, Steve also saw the prospect of being able to try something new, as compensating adequately for his initial outlay.

[...] if it is successful, then the idea is for me to package it up and sell it to the other franchisees within the franchise, but we will see, I will be the first one in our franchise that does this kind of work, so potentially there is work within the franchise for me.

Consequences: Steve successfully piloted the new Product X in his area and worked with Bob in gathering all the necessary information and developing new processes so that it could be rolled out across the organization. The roll-out of Product X was a key event in Alpha's history as it marked a significant change in the company's product portfolio. In identifying the potential of Product X for franchisees, Bob even recruited a product specialist for the HQ team.

The exploration phase of replication strategies: Extending existing theory

We extend existing research by investigating how autonomous actions at the unit level facilitate RKF in replicator organizations. Below develop four propositions that capture the interplay between autonomous action, knowledge stickiness and RKF. Table 6 provides structured comparison of the four embedded cases.

TABLE 6

We show that unit managers' autonomous actions are vital to overcoming initiation stickiness. Autonomous actions lead to the creation of new knowledge (probing) but also prepare the political ground to legitimize the superiority of new ideas organization-wide (coercing and framing). Probing actions allow unit managers to further substantiate issues in the current business format and also identify superior solutions. Also, through probing and coercive actions unit managers are able to demonstrate that issues are common across units and thus increase pressure on HQ to act. Carefully framing issues is important for unit managers as it helps to legitimise new solutions within the context of the firm's replication strategy (see also Friesl and Kwon, 2017; Pandza, 2011). Thus, autonomous actions result in the establishment of local capabilities with regard to the issue identified (through probing) but, importantly, also raise unit managers' awareness about the challenges involved in initiating changes to the business format (through coercive and framing actions).

Proposition 1: In replicator organizations, the combination of autonomous probing, framing and coercive actions positively influences units' ability to overcome initiation stickiness when formal processes for RKF break down

Our findings also suggest that units' resource expenditure through autonomous actions may be a source of implementation stickiness. Although autonomous actions are necessary in order to overcome initiation stickiness, units may expend considerable resources in achieving a superior solution and, as a consequence, may be unwilling to share that solution. We show that autonomous action leads to the accumulation of local capability, which some franchisees consider an opportunity to capitalize on. Also, some unit managers consider autonomous action an extra-role activity that is neither commensurate with the idea of a 'proven' business

format, and thus justifies expectations of compensation from HQ. Thus, while initiation stickiness is related to the 'issue' identified by unit managers and the challenge of substantiating its value and credibility, implementation stickiness emerges in the very process of units' attempts to overcome initiation stickiness through autonomous action. Thus, despite shared understanding between units and HQ regarding the merit of a particular issue, RKF could be hindered by implementation stickiness.

Proposition 2: While autonomous action reduces initiation stickiness in replicator organizations autonomous actions may result in implementation stickiness due to unit manager expectations for HQ resource commitment.

Finally, our findings suggest that the emergence of implementation stickiness is moderated by the extent to which HQ commits resources. Indeed, episodes B and D indicate that HQ resource commitment leads to the implementation of RKF and eventual changes to the business format. As shown in these episodes, such resource commitments might come in different forms ranging from monetary payments to the commitment of other resources. However, in cases where HQ does not commit resources, knowledge remains at the unit level. While franchisees were able to convince HQ about the superiority of their new training programmes and thus reduce initiation stickiness, franchisees were not willing to share without compensation (see episode A).

Proposition 3: In replicator organizations, the degree of implementation stickiness due to replicatee resource expectations is moderated by HQ level resource commitments.

However, our findings also suggest that this does not terminate knowledge flows. Due to the lack of HQ resourcing franchisees identified alternative means of compensation. The Alpha case provides tentative evidence that LKF between franchisees are such an alternative form of compensation. Lateral sharing provides the opportunity of compensation 'in kind'

through the lateral exchange of knowledge between units that is unsanctioned by HQ but considered valuable on unit level. This has an important implication for replicator organizations. Knowledge flows are confined to pockets within the organization that occur ‘under the radar’ of HQ and thus potentially undermine a firms’ replication strategy (episodes A and C).

Proposition 4: Lack of HQ resourcing may lead to lateral knowledge flows between units in replicator organizations.

Theoretical Implications

This paper contributes to a specific area of knowledge based theory: the emergence of RKF in replicator organizations. We do this by drawing on the literature on knowledge stickiness as well as managerial autonomous action as a theoretical foundation. Below we discuss our theoretical contributions in greater detail.

First, we complement existing research on replication strategies by showing how the evolution of a business format through RKF is hindered by knowledge stickiness and by demonstrating how autonomous actions may compensate the breakdown of formal processes of RKF. Existing research has only provided a partial view on RKF by predominantly focusing on formal processes of RKF orchestrated by HQ (Winter and Szulanski, 2001; Jonsson and Foss, 2011). Yet, the stickiness of such knowledge flows, for instance due to diverging objectives of HQ and unit managers, as well as the unit level activities required to overcome knowledge stickiness have remained unexplored. By focusing on situations where formal processes for RKF break down we complement existing research by demonstrating that RKF emerge informally (Aalbers *et al.*, 2014) and are a highly negotiated political process. Our analysis provides new insights into the types of autonomous actions through which this is achieved: the autonomous development of local capability (probing), the formation of coalitions (coalescing), the careful framing of superior solutions, as well as the

formation of resource agreements. Thus rather than considering unit level initiatives as a source of 'role conflict' (Floyd and Lane, 2000) we show that autonomous actions are an integral part of the evolution of replicator organizations. We also argue that these findings are not only confined to franchise organizations. Political tensions inhibiting knowledge transfer have been reported in many other organizational contexts such as HQ-subsidary relationships in MNEs (Birkinshaw and Hood, 1998; Bouquet and Birkinshaw, 2008) as well as intra-organizational relationships (Carlile, 2004).

Second, while we show that autonomous action may facilitate the initiation of RKF, it might also precipitate the emergence of implementation stickiness by raising expectations of compensation on the side of unit managers. The emergence of implementation stickiness explains the extent to which RKFs are realized or whether knowledge is shared laterally (and unsanctioned) amongst organizational units. By pointing out the interplay between autonomous action and implementation stickiness we significantly add to extant theory on knowledge transfer. Existing theory on knowledge transfer argues that the successful initiation of knowledge flows (the formation of agreements to transfer) is followed by a phase of implementation in which information and resources are shared (Szulanski, 1996, 2000). Indeed, Szulanski (2000) explains that this phase may also be subject to distinct sources of knowledge stickiness that may inhibit RKF such as the relationship between units and HQ, the absorptive capacity of HQ (Cohen and Levinthal, 1990) as well as a lack of willingness and motivation on the side of units to share knowledge. Our paper adds to this argument. Compensation for the autonomous development of unit level capabilities and compensation for 'perceived' extra-role activity might not be commensurate with the charter of being a 'franchisee' (Galunic and Eisenhardt, 1996). We show that the resourcing decisions at HQ and unit levels crucially influence whether knowledge is shared with HQ or whether it is only laterally shared amongst units.

Third, the interplay between autonomous action, resource expectations and lateral knowledge flows (LKF) provides new insights into the reasons for unit level divergence from a business format. Currently, deviation is theorized as the inappropriate adaptation to local contexts (Szulanski and Jensen, 2008; Winter *et al.*, 2012) or the mindless drift of routines over time (Cohen and Bacdayan, 1994; Friesl and Larty, 2013). Yet, these studies cannot explain simultaneous deviation in multiple units. In identifying and unpacking the causes of LKF this study helps to explain why deviation might not be confined to a focal unit but might be part of deliberate unit-level strategies adopted across multiple units at the same time. Due to the effort involved in autonomous action unit managers may expect that HQ agrees to commit additional resources. This expectation creates the possibilities for deviation. If HQ is able to overcome this by committing resources, this creates the condition for RKF to occur. However, a lack of HQ resourcing potentially results in unit managers' seeking resourcing from elsewhere, either through informal knowledge sharing groups within the franchise network or through individual profit-seeking behaviours, and thus increasing 'implementation stickiness' (Szulanski, 1996, 2000). In such cases, unit level resourcing results in LKF and the exchange and implementation of new knowledge across units. This results in the change of local practice within pockets of the organization, while leaving the intended replication strategy of the firm as a whole unchanged.

Finally, by unpacking the mechanisms behind unsanctioned knowledge flows we also contribute to the emerging debate on RKF more widely. Indeed, an important question is how firms would actually benefit from such knowledge flows and the conditions under which these benefits materialize. These studies indicate that RKF are perceived beneficial if units are fairly integrated (Ambos *et al.*, 2006), if knowledge is not too innovative (Mudambi *et al.*, 2014) and if subsidiaries have a long track record within the firm (Rabbiosi and Santangelo, 2013). One interpretation of these findings is that RKF are highly political and subject to HQ

power (Andersson *et al.*, 2015). Our paper contributes to these studies by suggesting that the benefit of unit level knowledge is not a ‘given’ but is constructed and negotiated in a political process between actors at the HQ and unit levels. Our findings provide deep insights into how autonomous actions at the unit level (such as ‘framing’) create a shared understanding of ‘benefit’ between HQ and units, which allows actors to overcome initiation stickiness. Also, while we agree that a dominating HQ might reject these appeals to establishing a sense of benefit (Ambos *et al.*, 2006), we also show that knowledge flows might still happen autonomously across subsidiaries without them being sanctioned or mediated by HQ.

Conclusions

While the qualitative, embedded case design of this paper provides new insights into the dynamics of RKF in replicator organizations, such research designs also have limitations regarding generalizability across a broader population of firms within the industry studied but also across industries (Siggelkow, 2007; Easterby-Smith *et al.*, 2008). Thus, we call for further research to investigate the role of autonomous action in the explorative phase of replicator organizations. Below we provide suggestions for further research both theoretically, as well as methodologically and also highlight implications for management practice in replicator firms.

As this paper draws on data from a particular organizational form (franchising), future studies could investigate the role of autonomous action in more hierarchical settings such as multi-national firms as well as organizations with different governance forms. Indeed, recent research suggests that a firms’ governance context has implication for how RKF unfold (Andersson *et al.*, 2015). Thus, the extent to which actors engage in RKF or LKF, as discussed above, may be contingent on the wider governance context of the firm.

This paper has also implications for future research aiming to test the propositions developed in this paper. Any hypothesis testing study requires the compilation of instances of

RKF in a sample of replicator firms. As a data base on replicator firms is not readily available we propose a survey design similar to other studies on RKF (Ambos *et al.*, 2006; Mudambi *et al.*, 2014) and knowledge transfer (Un and Cuervo-Cazurra, 2004; Andersson *et al.*, 2015; Vlaisavljevic *et al.*, 2016). In order to avoid issues of common method bias, we propose using two survey instruments (Podsakoff and Organ, 1986). A first survey could be used to collect data about specific instances of RKF and LKF within each firm. Also, as the survey requires respondents with direct involvement in RKF and autonomous action we suggest to following Aalbers *et al.* (2014) and include a name generator question through which respondents identify actors within their organization involved in each instance of RKF. Subsequently, a second survey instrument could be used to measure autonomous action, knowledge stickiness and HQ resourcing for each of these instances of RKF. While high quality item batteries for knowledge stickiness already exist (see Szulanski, 1996, 2000), new item batteries that capture autonomous action (framing, coalescing and probing), HQ resourcing as well as LKF need to be constructed and pre-tested. Moreover, we suggest controlling for different governance modes (e.g. franchising) as well as potential cross-border knowledge transfer effects.

Finally, our findings also have implications for managers in replicator organizations. The likely challenges with formal processes of RKF point out the crucial role of replicatees as agents of innovation in replicator organizations. Thus, the management of replicator organizations needs to focus on creating an environment in which actors would engage in autonomous behaviour. While autonomous action may compensate for the breakdown of formal processes of RKF, this also poses a threat to a firms' replication strategy. HQ managers should be particularly concerned with monitoring instances of autonomous action were no HQ resources were granted as unsanctioned LKF may lead to divergence from the replication strategy in pockets of the organization.

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TABLES AND FIGURES

Table 1. Overview of issue episodes

Episode	Description
A – New training programme	<ul style="list-style-type: none">▪ Mary was the first to raise an idea for Alpha to develop new training programmes for a different target market within existing client organizations.▪ Bob, however, saw this as requiring significant investment within an unfamiliar target market.▪ Mary and other franchisees disagreed and saw this as an easy way for franchisees to increase local profits, particularly as franchisees could then target existing clients with new training possibilities.
B – New processes for customer account management through a new web site	<ul style="list-style-type: none">▪ The Alpha web site provided prospective customers with an overview of Alpha's product and service offerings. If prospective customers wanted further information, they were directed to contact one of Alpha's 'regional representatives' (i.e. franchisees).▪ Janet first raised an issue about the limited functionality of the current web site at one of the quarterly meetings▪ Bob, however, believed that new business came primarily through building relationships with Alpha's existing (and extensive) customer base; he did not want to create an online business.▪ Franchisees, on the other hand, saw the development of a new web site as vital for the development of their businesses.
C – New after-sales information pack	<ul style="list-style-type: none">▪ Alpha required franchisees to send out a hard copy after-sales pack to clients, which needed to be delivered in an Alpha branded folder (which franchisees had to purchase from HQ).▪ John, after much discussion with other franchisees, was the first to raise the issue of the excessive costs of printing and purchasing folders at a quarterly meeting.▪ John requested that franchisees be allowed to send the after-sales pack by e-mail instead.▪ Bob, was adamant that the pack should be printed and posted, as it played an important part of the sales process which distinguished Alpha from competitors.
D – New product X	<ul style="list-style-type: none">▪ Steve raised an opportunity to Bob for a new product idea relating to the online sales of a product (Product X).▪ Steve had conducted initial research into the product and was convinced that franchisees could considerably increase their regional turnover.▪ Bob had already protested against other franchisees requests for the development of new online capabilities and reiterated those protests again.

Table 2. New Training Programmes: Autonomous actions, resourcing and consequences

Franchisee Autonomous Actions	Resourcing	Consequence
<p><u>Probing actions:</u> Franchisees acquire knowledge about possibilities for new training programmes <i>“it’s learning those things [...] there is a tremendous amount of value in finding these things out for yourself and learning”</i></p> <p><u>Coercive actions:</u> Franchisees coalesce in order to push the development of new training programmes <i>“I’ve got a few franchisees, you know, that I’ve met or I’ve clicked with that I feel they’re trying to do the same things as I’m trying to do. We chat and get together quite a lot”</i></p> <p><u>Framing actions:</u> Gap in business format; Resource dilemma <i>“[not having new training programmes] that’s not the basis for a franchise, that’s not the basis for a sensible business is it?”</i></p>	<p><u>Franchisees:</u> expend their own resources on developing new training programmes <i>“[Developing new programmes] is an additional burden on the franchisee [...] the positive side of that is if I get a couple of good features [...] I think it could really, really sell as a programme [...]”</i></p> <p><u>Alpha HQ:</u> HQ disagreed with initiative and refused resource commitment</p>	<p><u>Lateral knowledge flows:</u> Franchisees refuse to share their new programmes with HQ, yet share their ideas amongst themselves</p>

Table 3. New customer account processes: Autonomous actions, resourcing and consequences

Franchisee Autonomous Actions	Resourcing	Consequence
<p><u>Probing actions:</u> Franchisees acquire additional knowledge about what their competitors are doing <i>“We helped to develop it and we drove the development of it”</i></p> <p><u>Coercive actions:</u> Franchisees coalesce in order to increase pressure for a new web platform <i>“it took [...] several of us, to say “we need it changing, we need it updating [...] we can’t have a rubbish website.”</i></p> <p><u>Framing actions:</u> value for money and misfit in firm’s identity <i>“we can’t expect people to come onto the website and be impressed by our company”</i></p>	<p><u>Franchisees:</u> conducted initial analyses; agreed to help HQ design and develop new regional web pages and conduct testing of the new development <i>“if a franchisor is not interested enough to make the changes that you need to make in order for him to be successful as well as us then I don’t know”</i></p> <p><u>Alpha HQ:</u> HQ agree to resource new web site</p>	<p><u>Reverse knowledge flows:</u> New web site in place across all Alpha franchise outlets.</p>

Table 4. New after-sales pack: Autonomous actions, resourcing and consequences

Franchisee Autonomous Actions	Resourcing	Consequence
<p><u>Probing actions:</u> Franchisees develop a new prototype to improve cost efficiency <i>"we didn't feel that [what] we needed were there, we created them ourselves"</i></p> <p><u>Coercive actions:</u> Franchisees share new practice to highlight local benefits <i>"They've done it as well, they've emailed it"</i></p> <p><u>Framing actions:</u> attempt different ways of framing, from cost effectiveness to service quality <i>"[...]once I can prove that there is a benefit [of an e-mail based system]"</i></p>	<p><u>Franchisees:</u> Developed new e-mail prototype system which significantly lowered local costs & provided efficiency in processes <i>"I came across [this idea] and other people have gone "yeah, it's cheap and it's very easy to use [...] [after development] they're getting it in electronic format, which is what we're all used to now."</i></p> <p><u>Alpha HQ:</u> HQ disagreed with initiative and refused resource commitment</p>	<p><u>Lateral knowledge flows:</u> rejection of idea by Alpha HQ leads to franchisees sharing the new system amongst themselves</p>

Table 5. New product X: Autonomous actions, resourcing and consequences

Franchisee Autonomous Actions	Resourcing	Consequences
<p><u>Probing actions:</u> Franchisee acquires knowledge about market for Product X, and develops and launches an initial trial run <i>"it's been a situation where I can't get the equipment out to produce the products [...] but you know, that's all learning curves, so yeah, it could be quite interesting"</i></p> <p><u>Framing actions:</u> franchisee presents the idea in a way which fits with Alpha's product portfolio <i>"So, I'm trying to differentiate and pick and choose where we can [...] and I feel the [market for Product X] is good."</i></p>	<p><u>Franchisee:</u> Franchisee invested his own resources to develop and pilot Product X within his region <i>"While overheads stack up, I'm maintaining everything that I do at the moment"</i></p> <p><u>Alpha HQ:</u> Bob, Alpha MD, works closely with the franchisee on the development of the Product X pilot.</p>	<p><u>Reverse knowledge flows:</u> After the franchisee's initial success, Alpha HQ further developed the idea and rolled it out across the organization</p>

Table 6. Cross comparison of episodes and implications for Alpha's replication strategy

	Episode A	Episode B	Episode C	Episode D
	New Training Programmes	New processes for account management	New after-sales pack	New product X
Initiation Stickiness	Reduced by autonomous action	Reduced by autonomous action	Increased by autonomous action	Reduced by autonomous action
	Agreement on opportunity for reverse knowledge flow	Agreement on opportunity for reverse knowledge flow	Disagreement on opportunity for reverse knowledge flow	Agreement on opportunity for reverse knowledge flow
Implementation Stickiness	Increased by informal franchisee level barter agreements	Reduced by HQ and franchisee resource commitment	Increased by franchisee resource commitment	Reduced by HQ and franchisee resource commitment
Realized knowledge flows	Lateral knowledge flows	Reverse knowledge flows	Lateral knowledge flows	Reverse knowledge flows
Implication for replication strategy	Potential divergence from replication strategy	Standardized new processes across units	Potential divergence from replication strategy	New product available across all franchise outlets