



Generating Responsible Commitment

Working Paper 60

February 2005

DR JOHAN ROOS*
Director

ROGER SAID*
Resident Associate*

*Imagination Lab Foundation - Rue Marterey 5 - 1005 Lausanne - Switzerland
Tel +41 21 321 55 44 - Fax +41 21 321 55 45 - www.imagilab.org

Imagination Lab Foundation researchers communicate their findings to interested readers through the Working Paper publication series. This paper should be considered preliminary in nature and subject to subsequent revision.

Abstract

Our purpose is to re-orient future research on commitment by framing it in terms of responsibility. We define commitment as an obligation to serve an interest even if that interest is distinct from self-interest, and assume that committed managers are responsible managers. Discouraged by the literature on commitment to strategy we used play literature inspired by Jungian psychology to suggest that playful processes may generate such commitment. Following these ideas, as action researchers we staged “serious play” retreats for three unrelated groups of company leaders, hoping to induce and observe moments in which people were open enough to be imaginative and spontaneous. We found that participants collectively embodied themselves in the strategy content, they made themselves vulnerable to the group by doing so, and at some stage the process became irreversible. To the extent they did this, which happened in two of the three cases, the managers committed to the strategy content and, hence, acted responsibly.

Key words: strategy, practices, commitment, responsibility, action research.

Commitment to Strategy and Responsible Management

It has been pointed out that ineffective implementation of strategy is often a consequence of lack of *commitment* to that strategy (Floyd and Wooldridge 1992; Mintzberg 1994; Westley 1990). For instance, Guth and MacMillan noted that managers “...*can not only redirect the strategy, delay implementation, or reduce the quality of implementation, but they could also even totally sabotage the strategy*” (1986:320). Uncommitted managers, thus, spell implementation problems. This paper explores how managers commit to the content of strategy practice, seen as both thinking and acting (Wilson and Jarzabkowski, 2003).

In literature, we find two types of remedies for lacking commitment. One is to align managers through reward and punishment, the other to win them over through inclusive and de-formalized strategy practices. While we think that the latter approach points in the right direction, we believe that this is not enough. The problem that seems to beset both schools of thinking is a reductionist account of managerial psychology: they both fail to see managers as moral actors and therefore fail to see a link between commitment and responsibility. With this paper we hope to re-orient future research on commitment by framing it in terms of responsibility.

Over the last two decades the literature on responsibility has markedly increased (Margolis and Walsh, 2003; Wood, 1991). However, this literature focuses on responsibility on the organizational level and very little research exists on the responsibility of the *individual* manager. And yet, the *notion* of responsible managers has been well explored in terms of managerial *commitment* to an organisation or a strategy. We believe that the concepts of responsibility and commitment are fundamentally related. Drawing on our experience in research, teaching, and consulting we are exploring and developing the following hunch: that for a strategy

practice to engender commitment it has to take into account the connection between commitment and responsibility.

We start by reviewing the literature on commitment, finding that the concept of commitment is not well connected to the concept of responsibility. Then, we argue for play as a mode of strategizing that can set the stage for commitment to emerge and present descriptions of three strategy retreats conducted in a play mode that we took part in as action researchers. Finally we identify *collective embodiment* and *mutual vulnerability* as necessary elements to make the process of strategizing *irreversible*, *i.e. committal*. We conclude with implications for research.

Revisiting Commitment

The framework of commitment developed by Mowday *et al.* (1979) and Porter *et al.* (1974) has become the de facto standard.¹ They defined commitment by three factors: (i) strong belief in and acceptance of the organization's goals and values; (ii) willingness to exert considerable effort on behalf of the organization; and (iii) definite desire to maintain organizational membership.

For two reasons, this definition is problematic for our purposes: First, the *focus* of commitment is on the organization, not (strategy) practices. Employees can be committed to a strategy without wholly embracing all the organizational goals and values (contra factor #i), and they can be committed to a strategy without having a desire to remain organizational members (contra factor #ii). Moreover, desire to maintain organizational membership is arguably not a part of commitment itself but

¹ It has been used by, for example, Kim and Mauborgne (1993), Wooldridge and Floyd (1990), Randall (1987), or Angle and Perry (1981). Porter and associates have also developed the "Organizational Commitment Questionnaire" (OCQ) which – like their concept of commitment – has proved very popular in organizational studies. It is reprinted in full in Mowday *et al.* (1979), along with a summary of the studies in which it had been used up to then. Despite the prevalence of the OCQ, different understandings of commitment abound, so that the concept has been criticized as becoming redundant (e.g. Morrow, 1983).

rather an *outcome or manifestation* of commitment (contra factor #iii). Instead of a monolithic focus on *the* organization, we assume that organizational members are committed, in varying degrees, to numerous sets of goals and values (see also Reichers, 1985).

Second, Porter *et al.*'s definition lacks *normativity*: Their conception is about “belief”, “willingness”, and “desire” – all of which seem to originate completely from within the individual without the contribution of outside pressures. Employees commit because they want to or because it serves their interest, which is an assumption underlying most of the literature on commitment. Korsgaard and Schweiger (1995: 61), for example, define commitment to strategic decisions as “*the extent to which team members accept the strategic decision reached and intend to cooperate in carrying it out*”. Thus, commitment is seen as a wholly private affair, being either goodwill (as in Porter *et al.* or Korsgaard and Schweiger) or calculative self-interest (e.g. Floyd and Wooldridge, 1992; Guth and MacMillan, 1986).

However, the view that a manager is purely a calculative and self-interested individual is being challenged by a growing body of literature in on corporate social responsibility, managerial responsibility, and ethical leadership (Margolis and Walsh 2003; Wood 1991). As Weaver *et al.* (1999:540) put it:

“Some instances of social performance might be instances of ‘positive duty’ rather than merely ‘negative’ efforts to avoid sanctions Managers should be viewed as taking ethical considerations into account in their ordinary, everyday decisions and actions.”

In this paper we define commitment as *an obligation to serve an interest even if that interest is distinct from self-interest*. Inherent in the *act* of committing (of which

commitment is the result) are a private dynamic (my identification with an interest) and a public dynamic (my statement of that identification in front of witnesses). I therefore owe it *to myself and my witnesses* to honor my commitment. As a manager, honoring my committing to an interest, say the formulation of an effective strategy or its diligent implementation, is behaving responsibly towards the organization I am entrusted to lead.

Theory X and Y of Commitment

The problem underlying most of the commitment literature is that there are no easy ways for an organization to earn its members' commitment. Ultimately this discourse touches on fundamental questions about human nature: Will we, if left to our own devices, act only to our own benefit, or also that of others? In management writing this question has been famously captured in McGregor's Theory X and Theory Y (McGregor, 1960).

Generating commitment through reward and punishment

The pessimistic view of human nature - man as exclusively self-interested - has spawned a whole genre of management writing, a prominent representative of which is agency theory (see Eisenhardt, 1989; Harris and Raviv, 1978; Jensen and Meckling, 1976; Ross, 1973). In agency theory, the concept of commitment is reduced to either fear of punishment or self-interest. The basic problem of agency theory is the relationship between a principal, e.g. a shareholder, and an agent, e.g. a CEO, that takes on work on behalf of the principal. Assuming a pessimistic view of human nature, the problem is how to make the agent commit to the interests of the principal

if (a) his or her own interests conflict with these and (b) it is difficult for the principal to ensure “correct” behavior on the part of the agent.

Agency theory uses the term “moral hazard” to describe situations in which agents cannot be held accountable for harm caused when they behave inappropriately. (However, despite the word “moral” appearing, there is not really a question of morality here – the agent is assumed to be amoral in any case.) Agency theory’s answer to the problem of avoiding moral hazard is either to supervise the agent’s behavior or to align the agent’s interests with those of the principal, usually through profit sharing or co-ownership.

This fundamentally pessimistic view of how to generate commitment in organizations can also be found in the strategy literature proper. For example, Guth and MacMillan’s (1986) proposals for generating commitment to strategy include using “political tools”, reward good performance with “rapid positive reinforcement”, and coercing unwilling employees through “threat of sanctions”.

Generating commitment through inclusion and de-formalization

Another, more optimistic, view is that commitment is generated through more humane work practices, e.g. increased opportunities for development or freedom to act independently (e.g. Kinnear and Sutherland, 2000; Dessler, 1999). This literature suggests that *inclusion* is a remedy against the lack of commitment to strategy (Korsgaard and Schweiger, 1995; Hamel, 1996; Westley, 1990; Kim and Mauborgne, 1993). Some empirical evidence suggests a causal link between inclusion and commitment (Oswald *et al.*, 1994; Kim and Mauborgne, 1993). However, there may be more to commitment than inclusion into the strategy process. In a study about the effects of middle management inclusion in strategizing Wooldridge and Floyd (1990,

p. 238) noted: “*respondents conveyed that low levels of involvement may reduce commitment, but that involvement alone does not create commitment*”. Further evidence for this comes from participant observation of strategy processes in four Scandinavian media firms (Roos *et al.*, 1996; Aadne, 2000). All these firms went through processes of restructuring or re-thinking their businesses. While building new strategy, each firm generally tried to include a broad range of employees (these were medium-sized firms), which at first *did* create some enthusiasm for the strategy process among participants. But boredom and detachment soon followed because the process, for all its inclusiveness, did not engage or excite the participants as much as it aspired to.

Apart from exclusion, over-formalization is also an obstacle for people to commit to strategy. Formalized strategizing in the guise of “planning” has, among other things, been accused of killing initiatives, being frustratingly inflexible, creating a class of strategists detached from operational business – and, especially, of widening the gap between formulation and implementation of strategy. A stronger valuation of soft knowledge (e.g. intuition in addition to numbers), a richer system of codification (e.g. images in addition to graphs), and the inclusion of operational managers have been proposed to de-formalize strategizing (e.g. Mintzberg, 1994).

The missing link

Inclusion and de-formalization of strategy process appeal to managers’ feelings of self-worth (via inclusion) or sense of appreciation (via de-formalization). Whereas the reward-and-punish school of generating commitment caters only to material needs of managers (and assumes that this is what they are interested in), the include-and-de-formalize school in addition addresses the emotional needs of managers. But both see

managers as basically egoistical: they commit when there is something “in it” for them – more shares, more money, more fun, more of a say. But if commitment is an act of taking responsibility, taking on an obligation to serve an interest, even if that interest is distinct from self-interest, than commitment is everything but egoistical. Hence, a process that appeals to managers’ egoism is not likely to generate commitment to serve an interest beyond self-interest. To generate commitment to strategy content, strategy practices should appeal to managers’ sense of responsibility. The inherent ambiguity of the socio-cultural activity called play (Sutton-Smith, 1997) can do exactly that by unlocking the dynamics that are inherent in the formation of commitment.

Generating commitment through serious play

By connecting the conscious and the unconscious (Jung 1961; Jung and Lazio 1993) play can reveal what is suppressed by practices that are purely intellectual, like the analytical work of conventional strategy practice. Through the ambiguous, imaginative and spontaneous expression that characterize play (Huizenga 1950; Sutton-Smith 1997) we can re-frame problems and obstacles in a way to help us overcome them and we can make sense of it all in a way that we can identify with. Students of creative arts (Rogers 1993; Malchiodi 1998) and play therapists (Schaefer 2003; Kalff 1980) have been aware of this for a long time. Organizational theory too, has begun to draw on Jungian ideas about how play with objects can mediate insights (Jung 1961). For instance, Barry (1994, 1996) and Campbell (1998) have used rich pictures and artefacts to reveal problems and unconscious processes in organizations. An emerging stream of literature in the strategic management field uses these ideas to describe and deliberate “serious play” (Roos and Victor, 1999; Bürgi and Roos, 2003;

Roos *et al.* 2004; Bürgi *et al.*, 2005). Serious play is defined as “*a mode of activity that draws on the imagination, integrates cognitive, social and emotional dimensions of experience and intentionally brings the emergent benefits of play to bear on organizational challenges*” (Roos *et al.* 2004: 563).

Following these authors, when managers engage in serious play they can bring hidden insights to the table, generate entirely new insights, and become enthusiastic and passionate about what they do. In the empirical studies about serious play the *mode of experience* was changed from work (i.e., deliberate intentions, and cognition-bias) to play (i.e., emergent intentions, and embodied) and the *medium of communication* from textual and verbal only, to also haptic and kinesthetic via, for instance, objects that can be crafted with ones’ hands. In this form, serious play falls into the broad category of “creative arts” (Blatner and Blatner 1997; Malchiodi 1998), where conceptual or physical media is played with in a process divided into warm-up, action, and sharing.

So far, research using this form of serious play has studied innovation in strategy content (Roos *et al.* 2004), analogical reasoning in strategy (Bürgi and Roos 2003), scenario planning (Jacobs and Statler 2005), and the hands-on process of crafting strategy with one’s hands (Bürgi *et al.* 2005). Based on this literature we assert that strategy practices that are akin to serious play are likely to set in motion the deep private and public dynamics that lead up to commitment. In turn, such commitment manifests responsibility.

Method

To gather data about commitment to strategy the first author used his personal contact to agree with three leaders in unrelated companies to stage and facilitate a strategy

retreat for their senior executives. He had previously worked as a researcher with one of these leaders and as a consultant with another. The third leader had volunteered to participate after a senior executive in his parent company asked several subsidiary managers. Although he knew the parent company executive, this was the first interaction between the first author and the third leader. All three leaders were aware of and accepted the experimental nature of the retreats, explicitly labeled “serious play.”

The purpose for the leaders we approached was to generate useful strategy content and commitment to this content. As action researchers (Argyris et al 1985; Eden and Huxham, 1996; Eikeland 2001) we wanted to observe, describe, and reflect on how commitment would or would not manifest itself. In one company retreat the first author was the sole facilitator, and in the two other cases another research colleague co-facilitated.

The retreat process (1-2 days) was identical in the three cases and designed to encourage people to consider two fundamental aspects of strategy: their organization and its business environment. In each case, the serious play process was a radical shift from to their typical strategy practices.

In the first case the retreat served as a means for an open-ended exploration of strategic issues, and participants were able to address issues previously considered taboo. In the second case a team of corporate strategists set out to refine an upcoming planning process for a new organization, but the retreat came to catalyze serious introspection about goals, skills and values of participants themselves. In the third case the leadership used the retreat to take a fresh look at the company and its strategy in light of recent business troubles. Although they played along, the retreat did not

seem to generate much commitment to anything. Exhibit 1 summarizes the background information on all three cases.

Case	Purpose of retreat	Participants	Days	Facilitators
1	Discuss strategy in a new way	Subsidiary leadership team (7 people)	1	1 st author and a colleague
2	Develop a coherent view of the upcoming planning process	Corporate strategy staff members (9 people)	2	1 st author
3	Take a fresh look at the company and its strategy	CEO, COO, and two senior staff members (4 people)	2	1 st author and another colleague

Exhibit 1: Background information

Before each retreat the first author interviewed the key people involved. In the first case this was only the CEO, in the second and third case all people involved. The interview protocol covered the role and responsibilities of the people, their view of the company and its industry, strategic challenges, and other issues relating to the topics of the retreat. If they asked about what would happen during the retreat the first author gave them an overview of the serious play process.

During the retreat process participants used a wide variety of playful construction materials, like LEGO bricks, to describe, create and challenge their views of their organization, its business environment as well as address existing and emerging strategic issues. After a short warm-up exercise, the facilitator asked the executives to

physically construct a model of their individual views about their organization as it appeared to them at present, and then to develop and build a shared view on this. Following this they represented the broader environment in which the organization operated. For further analysis we video-taped the first and second retreats, but were not allowed to do this during the third retreat. While one of the two facilitators engaged with the group (in case two and three), and in line with participant observation methods, the other one took extensive notes of what was said and done.

At the end of each retreat these executives had built an elaborate three-dimensional representation of their company and the landscape surrounding it, covering a table surface of 2-3m². More importantly, they had used the evolving construction to mediate open and deep conversations about strategy and strategic issues. After each retreat the first author reviewed the data with his colleagues and prepared a written (6-10 pages) memorandum to the liaison person in each firm, in which he summarized observations of the process.

Because only the first author took part in all of the retreats the following three descriptions are written in the first person style. The second author took an active part in analyzing the data and generating the findings. To preserve the anonymity of the organisations involved we have altered the names and some of the contextual information about the companies.

Case #1: Strategic Issues for Printo Co.

With high market shares, profits, and cash flows, Printo is in an enviable situation. Building on their success in a groundbreaking technological innovation 50 years ago, the company is the new leader in a specialized market for printing machines. Because

customer base and market penetration of retailers' products are growing steadily, Printo's strategy has traditionally been an exercise in accurate prediction of future sales growth. However, in 2002 small clouds were currently forming on the horizon as Printo's once innovative printing technology was increasingly being challenged by substitute technology.

Although Printo's subsidiary in Spain was as profitable as its peers, they faced three strategic issues. First, Printo had recently acquired a manufacturer of the substitute technology in the operating area of the subsidiary. So for its management team, a former rival suddenly became a "sibling". How should they deal internally and externally with this foe now turned friend? How would the customers react? Their sales people? Second, in the local Spanish market, retailers were trying to bypass the printers and get machines and specialized printing material directly from Printo. Although Printo's corporate strategy was clearly to stay loyal to their traditional constituency, the management of the subsidiary was less clear about that. How could they refuse the large retailers? Could they strike a win-win balance? Third, the relationship between corporate headquarters and the Spanish subsidiary was relatively constrained, especially regarding product development. There was a feeling within the management of the subsidiary that HQs was monopolizing innovation and in fact holding back information about new initiatives. How could they develop a better relationship with the development people at HQs? Could they continue to experiment with new technology with their own customers?

The leader of Printo Spain told me he was not sure their current strategy was enough to guide decisions and actions relative to these challenges. Therefore, he was eager to engage his entire top management team in an open and frank discussion about these strategic issues. It was not until now that the subsidiary leader was prepared to take

this conversation up with his leadership team. From the outset of the retreat he told his people was open to modify the strategy based on new insights developed during the day. In his formal invitation letter to the retreat the CEO of the subsidiary stated the objective was to “discuss strategy in a new way”. The retreat took place in April 2002.

What happened? As the eight executives play seriously and gradually represented their organization in its business landscape they addressed each of the three issues. They also openly discussed a topic previously seen as taboo.

The executives built their own organization as a castle with “strong walls” but “under attack” from more innovative competitors. To bring this point home, one participant took a big LEGO piece and banged it against the supposedly solid walls of the castle, which partially crumbled. This led to much laughter and ironic comments about the new substitute technology and how it would eventually break those walls.

Insert Exhibit 2 here (photo)

They portrayed their overall relationship with corporate HQ as an elephant, which meant a “strong, but sometimes too slow” relationship, and one that was “friendly in general, but “dangerous if irritated”. They did not seem to reach any major new insights regarding how to collaborate on product development beyond sending more “scouts” to corporate HQs and have them develop better personal relationships with key people.

As they crafted the overall business landscape, the executives came to discuss the corporate Printo policy on the newly acquired competitor. The acquisition was seen by corporate as an isolated event not worthy of much attention, and had instructed the

Spanish subsidiary leadership to collaborate and be friendly to this new inclusion into the corporate family. Interestingly, they never built a shared representation of this company, but their many individual models captured the friend-or-foe kind of ambiguity these people felt about this company.

They also built and discussed an even more sensitive topic, namely their customer's tendency to contact Printo directly. During this discussion they expressed views that Printo could not, and maybe even should not prevent this from happening. Retailers, it appeared to the workshop participants, were at the same time, supporting and potentially upsetting their ways of doing business. This ambivalence was captured in the representation of retailers: A construction almost as big as the one representing Printo, with a friendly face on the front and a tiger crouching behind a wall. This symbol mediated a heated discussion about potential pros and cons of actively encouraging, or passively letting this happen. When they discussed this matter they often touched or pointed at the "face" in the construction to illustrate their ideas or viewpoints. The group never reached any decision about what to do but they all seemed to feel good about venting their views about what was previously a taboo. The issue, as they said, was now on top of their agenda and would be revisited on each and every leadership meeting.

At the debrief ending the retreat the executives expressed positive views about the depth of the conversations. They were particularly surprised about the open and passionate discussion about what they considered two sensitive topics: how to deal with the newly acquired company in Spain, and how to deal with the retailers bypassing their clients. They also highlighted the many new metaphors used to symbolize their organization, customers, and the HQs. While holding up his think document summarizing their current strategy, the executive responsible for strategy

summarized his spontaneous view: *“Not in these many pages could I have captured the richness of what we built together today.”*

Case #2: Strategizing in Hearsay AG

During the 1990s Hearsay AG grew from a small local player into a major regional player in the telecom industry. As part of the ongoing consolidation in the industry in early 2002 Hearsay had acquired a large competitor and now faced the challenge of integrating some of its businesses. In turn, this move called for a new, more international strategy in Hearsay. It also meant that employees from numerous other companies had to be integrated into the strong Hearsay organization, brand, and culture. The new situation caused the leadership of Hearsay, including the new CEO recruited from the acquiring company, to revisit their entire strategy. The head of strategy was asked by the CEO to prepare and implement a new strategy process that would encourage the strategists from the acquired organization to help bring forth a new, shared strategy. “Plot the course and steer the ship” should be the spirit of this exercise. The process was initiated in mid 2002.

The head of corporate strategy had given the task to leading the strategy work to a senior member of the corporate strategy team, who immediately sketched a three-phase, traditional planning process, involving more than 70 planning people from the acquired businesses. Yet, the project leader was uncertain this was the right approach. What would be a better way? Should other people be involved too? What should be done during these practices, and for what purpose? At this stage I agreed to design and facilitate a retreat during which the corporate strategy group was invited to develop and share new ideas about how to go ahead, given the new organizational and competitive landscape. In the invitation to his colleagues, the project leader set the

objective of the retreat to “develop a coherent view of the upcoming strategy process.” The retreat took place in October 2002.

What happened? What started out as a way to discuss how to design and proceed with the upcoming strategy practice became a deep and introspective conversation about basic values within their own unit. As they gradually built a representation of the new Hearsay organization they revealed to one another and discussed differences in views. For instance, one participant argues for a smooth flow-like description, whereas another suggested the organization was more like a political network of personal connections. Eventually, they came to agree on an elaborate model showing the organization as both. From here, they began to populate the model with “key people” like leaders of functions and units they felt were part of their own “landscape” as a strategy group. They discussed and selected together various attributes for each of these key people, like whether they were in dark or light colors, or were large or small. Eventually, they also built and placed themselves as individuals representing different skills and values within their unit.

During this work they came to spend much time on representing their immediate boss as protecting an enclosed zone – their group of people. Suddenly their position within the organization looked precarious. As the conversation continued they felt increasingly under threat from the new regime, and they modified the symbol of their boss to have two faces: a live one and a skull – “*the living Karl and the dead Karl*”. The question was if they could trust him to continue to protect them to champion the strategy work within the organization. Their opinions differed.

Insert Exhibit 3 here (photo)

Next, they began to focus on what they could contribute as a group to the strategy process. A decisive moment was when one participant challenged what he considered his colleagues' lack of passion for the upcoming strategy work. "*What is our passion here? What is our dynamism?*" he burst, while grabbing a bottle of soda and violently shaking then opening it. As the content sprayed over the stunned participants and the construction on the table he exclaimed, "*That is passion! That is dynamism! That's what we need in this strategy process!*" This episode re-oriented the discussion from introspection about their unit to their upcoming task, i.e., to design and deliver a strategy process.

Over a few hours the model evolved into an elaborate description of the planned and ideal strategy process. The half-empty soda bottle remained an important part of their "ideal" part of the construction. Unlike the project leader's preliminary plan they now built together a strategy process that included only a few people of the (70) "planning" staff of the many business units. Instead, their evolving construction included a range of people from business operations as well as functions not usually invited to take part of corporate strategy practices, including brand, culture, customer service, and HR. A variety of symbolic and colorful materials represented the variety of people they now collectively thought should be involved. As they stood back and described the story of their model, they emphasized the need to involve people rather than on imposing on them a strategy that was conceived without them. From then on, the discussion centered on issues of how to proceed to make this happen. It was particularly sensitive as it implied that the project leader had to de facto cancel the existing plan, including already set dates for a number of gatherings of the 70 strategy people. It also meant he had to revisit the already approved budget.

Then the events took a dramatic turn. One of the strategy group members who the previous day had excused himself suddenly appeared. As a courtesy to the new arrival the project leader proudly asked one of his colleagues to share their new “story”. The person selected to present reacted very awkwardly, as if reluctant to share the meaning of the construction. He visibly struggled to depersonalize the story and even physically distance himself from the model by not pointing at its various elements, like they all had done before the break. After maybe only a minute the newcomer interrupted him with deprecatory demeanor, and was very critical about the content of what he said, especially the idea to involve more and other people. Strategy, the newcomer was arguing, *“had to be done by a team of experts, not by involving a bunch of operational managers.”* At one stage he also said: *“We need a new mission? Well, just give me 15 min in another room, and I will write it just like I wrote the last one.”* Moreover, he also used some of the vocabulary of the group in a derisive way - for example, the notion of “being a missionary of strategy” when going out to operational units, in his mouth became the “missionary position”. These interventions and interruptions caused neither laughs nor complicit grins among the people in the original group. On the contrary, their body language indicated great discomfort. The ambiance had shifted dramatically.

After the “presentation” the project leader stood up. While pointing at various facets of the model they had build, he told the rest of the group that he had indeed changed his mind about what was the right way forward. As project leader he would use his authority to cancel the already planned strategy process, and he also said that it was a risk he was willing to take. The bulk of the work ahead, he explained, would be to *“identify and invite key people from a variety of units and functions, beyond strategy, to be part of a bottom-up process of strategy making.”* Looking at the newcomer he

also said that there is value in the kind of top-down approach they had previously used, and invited him to contribute in whatever way he could. Then, he thanked everybody and ended the retreat (approximately 3h before schedule). People were visibly shaken.

In interviews immediately and a few weeks after the retreat participants said it was one of the more memorable strategy discussions ever. Most of them recalled in detailed the construction and some of the key metaphors used. They had also vivid memories of the soda bottle and the newcomer episode. On his way back to the office after the retreat the project leader summarized his views: *“I am shocked about the split in our strategy group. I knew we all weren’t on the same page, but this...”* He added: *“I am glad it came to the surface so that I can deal with it.”*

Case #3: Taking a fresh look at Gadget Ltd.

“I cannot understand it,” the CEO told me during our meeting, *“I have been explaining and motivating the strategy over and over again. Yet, it is like they do not hear me. Why don’t they do something to move us ahead..?”* His second in command, the COO, nodded and added: *“Just think of how many days we have been touring various sites to present and take questions about our strategy. Was it all wasted?”* A few years earlier the CEO of Gadget Inc. had recruited a new COO to form a strong leadership duo. The remaining part of the leadership team consisted of ten senior executives with distinct functional or business unit responsibilities. Six months earlier the CEO asked the COO to help him develop and champion the company’s new strategy, which was intended to get the company to work in a different way while remaining true to its vision and mission. In a typical top-down manner the leadership duo had ‘communicated’ this strategy to the rest of the leadership team, and in turn to

the rest of the organization. At its core this strategy outlined the goals and actions that the leadership felt was necessary to make the company more adaptive to increasing competition and new technological innovations, this threatened to deteriorate their comfortable leadership position. It was also intended to spark more life into an organization that was traumatized by a major cost-cutting campaign following two years of declining results and significant layoffs. As the new strategy trickled through the organizations the results did not improve, and the leadership duo became increasingly frustrated.

At this stage I agreed with the CEO to stage a retreat for him, the COO and a few staff members of his choice during which they would take a fresh look at the company and its strategy. If the retreat led to new insights the CEO was prepared to follow it up with a similar retreat for the additional ten people leadership team. The retreat took place during November 2003 in a comfortable hunting lodge a few hours drive from the headquarters.

What happened? The CEO took the lead in constructing a representation of the company in its business landscape, but was soon challenged by the two staff members. The CEO had especially asked them before the retreat to not withhold their views. After a few hours of gradually depicting how they saw the realities of the organization that day they centred on three issues. The first was the “*difficult and dangerous crossing*” the organization was currently making, represented by a lava stream. The problem, they said, was that too many people still remain on “the other side” of the bridge together with some “dead elephants,” which represented parts of the organization that was not yet restructured. However, they praised the parts of the organization that had already crossed the bridge. These people, they said, were both enthused and forward looking, and some were even “*running so fast the rest of the*

organization cannot keep up.” Secondly, they spend much time representing and discussing the huge supply chain, which they felt was still lagging behind in this evolution. In their model, although the “wrong values” were gradually dismantled a ghost was lurking behind the wall ready to appear when things went sour.

Thirdly, they came to discuss the relationship between the leadership duo and the ten people management team (MT). They built themselves as physically above and somewhat detached from the GM group. The COO insisted: *”the MT members are gathered around a table underneath our strategic priorities.”* During this part of the process the COO took the lead in the discussion. He elaborated extensively about internal barriers and infighting (represented by black bricks) between MT executives. He also said that these people had a tendency to *“pass the monkey”* along, meaning not acting responsible. He also talked about a “cold wind” (represented by a polar bear) blowing among MT members. Finally, he placed a whip in the figure representing him in the construction and jokingly said that it could be one of two things: a conductor’s baton or a whip.

Insert Exhibit 4 here (photo)

After this introspection we changed the focus to Gadget’s business environment. Despite four people co-constructing, only a handful of elements appeared on the table. These included a subcontractor in India, who was portrayed as both a friend and foe as they were fearful this company would steal their intellectual property. Another player in the landscape was a major software company, which whom they had developed very good personal relationships. A third player was their largest supplier raw materials for the manufacturing process. They had particular problem agreeing on

how to portray this supplier to show that it is both a dear friend and a source of future trouble because of environmental concerns over the raw materials. Only then did these executives add a representation of the customers, followed by very simplistic symbols of a few competitors, and alliance partners.

As facilitator I challenged the COO to further give meaning to and make sense of the largest customer, a retail chain. How did they really look like, according to him? The CEO had only used a simple plastic brick with the same colour as the customer's logotype. Encouraged by the CEO the COO went away to make a richer representation. After a few minutes he returned with plate in LEGO materials with just the name of the customer written on it in bricks. *"This is a sufficiently good representation of them,"* he said in a way that prevented any further comments from me or anybody else. The difference between this simplistic model and a much more elaborate one built by the CEO was striking. On the whole, they spend much less time discussing the outside of the firm than their previous introspection.

The conversation then focused on potential changes to their strategy, manifested by the three strategic priorities, from what they had built. During this phase the two staff members were silent and the two top people seemed to agree. They decided to issue a simple principle to the MT executives, which captured their view before, during and after the retreat: *"Hold on to the strategy, but be prepared to change tactics."*

At the end of the retreat all four participants said they thought it was a "useful" process, but we agreed that few new insights had emerged. The one that all four of them thought was new and insightful was the many connections that they had with external players, and a few they thought should be added. As a consequence the CEO gave the COO the task to review the scope and nature of these connections. The two

staff members did not offer any views during this debrief, and instead took careful notes about what their two bosses said.

Findings

During these retreats we observed the imagination and spontaneity that the play literature predicts when people are true to their real self, and which we have suggested set the stage for commitment to emerge. Manifestation of commitment was a sense of irreversibility, a shared feeling among participants that they could not go back anymore, that they had to stay true to what had come out during the session. In the case of Hearsay, this was further manifested when they later on changed their whole strategy process as a result of that meeting. This sense of irreversibility, however, only emerged in the Printo and Hearsay retreats but not in Gadget. In this respect, we have observed a correlation with two phenomena that we call *collective embodiment* and *mutual vulnerability*. We suspect that collective embodiment and mutual vulnerability are necessary conditions for processes to become irreversible, i.e. committal.

We now describe the phenomena collective embodiment and mutual vulnerability we seem them in the case data, and then discuss how the process becomes irreversible when embodiment and vulnerability reach critical mass.

Collective embodiment

Because participants operated in an expressive mode with fewer limits on the form of expression, the artefacts created were able to capture the rich texture of heated arguments, anecdotes, or differences of opinion that were part of their strategy practice. Instead of neatly tying up all loose ends their symbolic representations

retained whatever confusion, perplexity, or conflicts had emerged. In the first two cases the group was able to “get it all out”, to collectively embody into the artefacts what they thought was relevant. This process of embodiment allowed for an externalisation of emotions and views, even “taboo” issues, which people might otherwise keep to themselves.

The castle representing their organization and the elephant representing how they perceived the relationship with the HQs, evidenced collective embodiment by the Printo executives. Beyond simply stating that there was “a problem” they were able to make the problem visible, and thereby, easily address it. The Hearsay executives embodied a diffuse feeling of fear in the stark image of their boss, which let them discuss how precarious the status of their unit was within the organisation and how much they depended on his protective hand.

The top people in Gadget similarly collectively embodied the relationship between themselves and the next layer executives. The distance between them, the symbols of infighting, etc. made the problems among the company’s leadership apparent. Interestingly, we noted that the collective embodiment was less evident during the conversations about the business environment, i.e., when they looked outside their immediate organization.

Mutual vulnerability

Our second observation is that sort of disclosure made participants vulnerable. This was most visible in Hearsay. The newcomer’s aggressive stance and the reflective stance of the project leader evidence how vulnerable the process was. This episode also illustrates how mutuality of vulnerability can be checked instantly. Participants

have a very subtle feeling if others are making themselves vulnerable in the same way. If not, they will pull back immediately.

Participants in the Printo retreat made themselves vulnerable by collectively surprising one another by their defensive worldview. By representing their own organisation as an old castle they expressed their fear of being overtaken by more agile competitors - a hitherto taboo topic. Similarly, by representing an ally that threatens to upset their way of doing business as a two-faced creature – a smiling face and a tiger – they similarly expressed their feelings of ambiguity and perplexity. This had also until now been a topic rarely discussed among this group of people. In both cases this suggests a *mutual* vulnerability. In terms of play therapy, when people feel that they *can* be imaginative and spontaneous they do make themselves vulnerable to others. In other words, mutual vulnerability may need *collective* embodiment.

The top-executives in Gadget did not show the same sense of vulnerability, individually or mutually. On the contrary, the COO seemed to have only reinforced his existing views about the people reporting to him as infighting and ineffective, suggesting they needed to be “whipped.” Given his body language, the CEO already knew his colleague’s views about the people reporting to him but was not entirely comfortable with these views.

Irreversibility

Our third observation is that beyond a certain point the process became *irreversible* in that participants did not seem to be able to disown what they had built and said. In the first two cases we observed that participants did not simply jump into sensitive topics without an initial phase of hesitant observations. In a series of gradual, tentative steps,

participants offered cautiously phrased, preliminary observations, trying to limit or contain the amount of self-disclosure involved. Surprisingly quickly, though, they shared what appeared to be genuine views, which in some cases were sensitive, and hence, potentially dangerous. When they passed this moment it was as if the process became almost impossible to reverse. This resembles what happens during the “action phase” discussed in the play therapy literature. If, however, there would have been *no* mutual willingness to be vulnerable, the process could have been reversed or restarted at any point: What happened before would not have mattered. Irreversibility also means that *after* the process one cannot act as if it had never happened. This is analogous to why the play therapy literature places such importance on debriefing after the meaning creation and the sense making that happens during the action phase. In the Hearsay group we observed evidence of this in the episode of the newcomer. The original participants had implicitly agreed to be vulnerable; to openly express themselves in new and possibly unprotected ways. Just how unprotected these expressions were, became clear through the sense of awkwardness that arose when the newcomer joined the conversation. Although he belonged to the group, he was not part of their experience of personalized strategizing, which led to an asymmetry in vulnerability. As he had not immersed himself in a process of collective embodiment he had not made himself vulnerable. The others had done this, to each other and to him. It was because of this asymmetry he was able to be cynical, ironical and detached and it was also because of that the others were *not* able to respond. From the moment they accepted to be vulnerable, what came out of the process (the construction) was so entrenched with their own personalities, that they could not disown it anymore. Despite this uncomfortable incident the group did not dispose of what they had discovered. To the contrary, it had a direct impact on the strategy process they had set

up before the workshop. After personally identifying themselves with an inclusive approach to strategizing they felt *the obligation* to include people other than the traditional strategic planners – for example, members of culture or branding teams. To them, this was being true to themselves.

Although it was not as dramatic as in Hearsay we observed a lighter version of such irreversibility among the leadership team in Printo. The executives built an elaborate symbol of the retailers, which tried to bypass their suppliers (Printo's direct customers). After they had finished this symbol of a previously considered taboo topic, they could no longer ignore the problem, and they agreed to make it an important agenda item for future meetings. The process was irreversible.

We did not observe such irreversibility during the Gadget retreat. In light of the findings above, this is not surprising since they did not really embody themselves collectively, nor showed signs of mutual vulnerability. To use the language of creative arts, they never entered the openness needed to be imaginative and spontaneous. Hence, we think the process could have been reversed at any time.

Our reflections portray the cases in very different light. Gadget leaders did not commit to anything they said and the Printo group to some extent. The Hearsay leaders committed to a large extent to what they discussed.

To commit to the strategy content, our initial hunch was that content should embody the strategists rather than the other way round as conventional wisdom has it. Our findings support that hunch. By embodying themselves in the artifacts of strategy content *they* produced, the strategists we observed made a commitment. In the case of Hearsay, when an outsider to the process joined, the participants felt so awkward because by then they had invested much of themselves in the construction. When it

was ridiculed, *they* were ridiculed. By putting their mark on the construction (read: strategy content), they had *committed* to it.

In this paper we assumed that when people made commitment they act responsibly. Consequently, the people in Printo and Hearsay did. Those who did not make such commitment, e.g., the leadership group in Gadget, did not act responsibly. Exhibit 5 summarizes schematically our findings across the three cases.

Case	Collective Embodiment	Mutual Vulnerability	Irreversibility	Commitment to Content	Did they act Responsibly?
Printo	Medium	Medium	High	Medium	Yes
Hearsay	High	High	High	High	Yes
Gadget	Medium	Low	Low	Low	No

Exhibit 5: Summary of findings

Caveat

Given all limitation of this study a caveat is in order. We came to this study with a hunch, and we came out of it with an even stronger hunch about an important topic matter. Yet, we studied only three cases and each focused on a single strategy retreat. Moreover, based on Jungian psychology we used a very particular method – serious play – to intentionally generate commitment. Therefore, we reject any claim that our findings in any way can be generalized beyond the context we have used. Also, we do not claim we can predict commitment to strategy in any situation. What we have done is simply to describe the context we co-created with the leaders in each case, and reflected over how the people we observed committed, or not, to the strategy content they brought forth and discussed.

Implications

In light of the limitations of our study, we still suggest our findings contribute to the literature in five ways. First, our findings adds to the discourse on commitment to strategy by extending previous work by Mintzberg (1994), Kim and Mauborgne (1993), Wooldridge and Floyd (1990), and Westley (1990). Whereas these authors make a case for more inclusion and less formalism in the strategy process, our study focus on deeper and intricate psychological processes during the strategy practices as such. That shift in level of analysis may be worthy of further reflection and empirical study in the field of management studies.

Second, much literature on commitment to strategy does not incorporate publicity because it equates commitment with goodwill or self-interest. A moral obligation subtly, but powerfully, changes the nature of commitment to strategy. Our study suggests that this topic may be included in further research on strategy practices.

Third, because we studied what strategists did while strategizing our study contributes to the activity view of strategy, which focuses on the many situated activities that make up strategy and strategizing in organizations (Bourdieu 1990; Orlikowski 2002; Johnson *et al.* 2003; Jarzabkowski 2004).

Forth, our study contributes to the emerging literature on serious play like strategy practices, *e.g.*, Roos and Victor (1999), Bürgi and Roos (2003), Roos *et al.* (2004), and Bürgi *et al.* (2005). By using serious play we conceptualized and empirically explored the process of commitment to strategy content as a result of a truly creative process. Our findings suggest that not only does serious play “*bring the emergent benefits of play to bear on organizational challenges*” (Roos *et al.* 2004), this activity also create the context for generating commitment to strategy content. As was evidences in two of the three cases, seeing their traces clearly visibly in the strategy

artefact can fill strategists with a sense of pride and ownership and so further their attachment to it, which is the private side of commitment. Indirectly, via the serious play concept and practice our findings also supports the literature on the Jung-inspired symbo-construction (Barry 1994; 1996), which focuses on how physical objects in general mediate deep inquiry about sensitive but important issues in organizations.

Finally, our findings also suggest a re-conceptualization of the very notion of *commitment to strategy*. The strategy literature has so far been content to equate commitment with goodwill or self-interest (partly due to the influence of Porter *et al.*, 1974). Our definition of commitment *per se*, and by implication commitment to strategy, explicitly excludes self-interest. It retains the aspect of goodwill or emotional identification, but extends the concept by adding an element of moral obligation. Contrary to much of strategy writing, it allows, and even demands, for managers to be seen as responsible actors.

REFERENCES

Aadne, J. H. (2000) Social interaction in strategy processes: applied action research in the Scandinavian media world, Dissertation No2378, University of St. Gallen.

Angle, H.L. and Perry, J.L. (1981) "An empirical assessment of organizational commitment and organizational effectiveness", *Administrative Science Quarterly*, Vol 26, pp. 1-14.

Argyris, C., Putnam, R. and McLain Smith, Diana (1985) *Action science: concepts, methods, and skills for research and intervention*, Jossey-Bass, San Francisco/London.

Barry, D., 1996, "Artful Inquiry: A Symbolic Constructivist Framework for Social Science Research," *Qualitative Inquiry*, 2 (4): 411-438.

Barry, D., 1994, "Making the Invisible Visible: Using Analogically Based Methods to Surface Conscious Organizational Processes," *Organizational Development Journal*, 12 (4): 37-48.

Bateman, T.S. and Strasser S. (1984) "A longitudinal analysis of the antecedents of organizational commitment. *Academy of Management Journal*", Vol 27, pp. 95-112.

Blatner, A and A Blatner, 1997, *The Art of Play: Helping Adults Reclaim Imagination and Spontaneity*, New York: Brunner/Mazel

Bourdieu, P. 1990. *The logic of practice*. Cambridge, UK: Polity.

Bürgi, P., and Jacobs, C., and J. Roos, 2004, "From Metaphor to Practice in the Crafting of Strategy," *Journal of Management Inquiry*, 13(4), pp. 1-17.

Bürgi, P., and J. Roos, "Images of Strategy," *European Management Journal*, 21.1, 2003, pp. 69-78.

Campbell, M.C, "Interpreting Rich Pictures Symbolically?" *Systems Research and Behavioral Science*, 15 (4): 221-232.

Dessler, G. (1999) "How to earn your employees' commitment", *Academy of Management Executive*, Vol 13, pp. 58-67.

Eden, C., And Huxham, C. 1996. Action Research For The Study Of Organizations. In S. E. A. Clegg (Ed.), *Handbook Of Organization Studies*: 526-580. Thousand Oaks: Sage.

Eikeland, O. 2001. Action Research as the Hidden Curriculum of the Western Tradition", in P. Reason & H. Bradbury, *Handbook of Action Research: Participative Inquiry and Practice*. London: Sage.

Eisenhardt, K.M. (1989) "Agency theory: an assessment and review", *Academy of Management Review*, Vol 14, pp. 57-74.

Floyd., S., Roos., J., Kellerman, F., and C. Jacobs (eds.), 2005, *Innovating Strategy Processes*, Blackwell, Oxford

Floyd, S.W. and Wooldridge B. (1992) “Managing strategic consensus: the foundation of effective implementation”, *Academy of Management Executive*, Vol 6, pp. 27-39.

Ghemawat, P. (1992) *Commitment – the dynamic of strategy*, The Free Press, New York.

Guth, W.D. and MacMillan, I.C. (1986) “Strategy implementation versus middle management self-interest”, *Strategic Management Journal*, Vol 7, pp. 313-327.

Hamel, G. (1996) “Strategy as revolution”, *Harvard Business Review*, Vol 74, pp. 69-82.

Harris, M. and Raviv, A. (1979) “Optimal incentive contracts with imperfect information”, *Journal of Economic Theory*, Vol 20, pp. 231-259.

Huizenga, J., (1950), *Homo Ludens: A Study of the Play Element in Culture*, Boston: Beacon Press.

Jacobs., C., and M. Statler, “Strategy Creation as Serious Play,” in Floyd., S., Roos., J., Kellerman, F., and C. Jacobs (eds.), 2005, *Innovating Strategy Processes*, Blackwell, Oxford, pp. 47-55.

Jarzabkowski, P. 2004. Strategy as practice: Recursiveness, adaptation and practices-in-use. *Organization Studies*, 25(4): 529-560.

Jensen, M and Meckling, W (1976) "Theory of the firm: managerial behavior, agency costs, and ownership structure", *Journal of Financial Economics*, Vol 3, pp. 305-360.

Johnson, G., Melin, L., & Whittington, R. 2003. Guest editors' introduction. Micro strategy and strategizing: Towards an activity based view. *Journal of Management Studies*, 40(1): 3-22.

Jung, C.G and de V.S. Laszlo, 1993, *The Basic Writings of C.G. Jung*, New York: Random House.

Jung., C.G., (1961), *Memories, Dreams, Reflections*, New York: Random House.

Kalff, D., 1980, *Sandplay: A psychotherapeutic approach to the psyche*, Santa Monica: Sigo Press

Kim, W.C. and Mauborgne, R.A. (1993) "Procedural justice, attitudes, and subsidiary top management compliance with multinationals' corporate strategic decisions", *Academy of Management Journal*, Vol 36, pp. 502-526.

Kinnear, L. and Sutherland, M. (2000) "Determinants of organizational commitment amongst knowledge workers", *South African Journal of Business and Management*, Vol 31, pp. 106-112.

Korsgaard, M. A. and Schweiger, D. M. (1995) "Building commitment, attachment, and trust in strategic decision-making teams: the role of procedural justice", *Academy of Management Journal*, Vol 38, pp. 60-84.

Malchiodi, C.A., 1998, *The Art Therapy Sourcebook*, Lincolnwood: Lowell House

Margolis, J.D., & Walsh, J.P. 2003. Misery loves companies: Rethinking social initiatives by business. *Administrative Science Quarterly*, 48: 268- 306.

McGregor, D (1960) *The Human Side of Enterprise*, McGraw-Hill, New York.

Mintzberg, H. (1994) *The rise and fall of strategic planning*, Prentice Hall, New York.

Morrow, P.C. (1983) "Concept redundancy in organizational research: the case of work commitment", *Academy of Management Review*, Vol 8, pp. 486-500.

Mowday, R.T. and Steers, R.M. (1979) "The measurement of organizational commitment", *Journal of Vocational Behavior*, Vol 14, pp. 224-247.

Nef, J. 1995, *Human Security and Mutual Vulnerability*, ITDG Publishing

Oswald, S.L., Mossholder, K.W. and Harris, S.G. (1994) "Vision salience and strategic involvement: implications for psychological attachment to organization and job", *Strategic Management Journal*, Vol 15, pp. 477-489.

Porter, L.W., Steers, R.M., Mowday, R.T. and Boulian, P.V. (1974) "Organizational commitment, job satisfaction, and turnover among psychiatric technicians", *Journal of Applied Psychology*, Vol 59, pp. 603-609.

Randall, D.M. (1987) "Commitment and the organization: the organization man revisited", *Academy of Management Review*, Vol 12, pp. 460-471.

Reichers, A.E. (1985) "A review and reconceptualization of organizational commitment", *Academy of Management Review*, Vol 10, pp. 465-476.

Rogers, N., 1993, *The Creative Connections: Expressive Arts as Healing*, Palo Alto: Science and Behavior Books

Roos, J, Victor, B., and M. Statler, "Playing Seriously with Strategy," *Long-Range Planning*, Vol. 37 (6) December 2004, pp. 549-568.

Roos, J. and Victor, B. (1999) "Towards a model of strategy making as serious play", *European Management Journal*, Vol 17, pp. 348-355.

Roos, J., von Krogh, G. and Simcic Bronn, P. (1996) *Managing strategy processes in emergent industries: the case of media firms*, Macmillan Press, Houndmills/London.

Ross, S (1973) “The economic theory of agency – the principal’s problem”, *American Economic Review*, Vol 63, pp. 134-139.

Schaefer, C.E (Ed.), 2003, *Play Therapy with Adults*, New Jersey: John Wiley

Simon, H.A. (1993) “Strategy and organizational evolution”, *Strategic Management Journal*, Vol 14, pp. 131-142.

Steers, R.M. (1977) “Antecedents and outcomes of organizational commitment”, *Administrative Science Quarterly*, Vol 22, pp. 46-56.

Sutton-Smith, B. (1997), *The Ambiguity of Play*, Cambridge, MA: Harvard University Press.

Weaver, G.R., Treviño, L.K., Cochran, Ph.L. (1999) Integrated and decoupled corporate social performance: management commitments, external pressures, and corporate ethics practices, *Academy of Management Journal* Vol 42, No 5, 539-552

Westley, F.R. (1990) “Middle managers and strategy: microdynamics of inclusion”, *Strategic Management Journal*, Vol 11, pp. 337-351.

Wiener, Y. (1982) “Commitment in organizations: a normative view”, *Academy of Management Review*, Vol 7, pp. 418-428.

Winnicott, D.W. (1971), *Playing and Reality*, London: Routledge Press.

Wooldridge, B. and Floyd, S.W. (1990) “The strategy process, middle management involvement, and organizational performance”, *Strategic Management Journal*, Vol 11, pp. 231-241.

Wood, D.J. 1991. Corporate Social Responsibility Revisited. *Academy of Management Review*, Vol. 16, pp. 691-718