Boosting business with data analysis
Tim Skelton talks with Jan van Dalen and Dennis Fok

Keeping a healthy distance from senior management
By Gijs van Houwelingen

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By Fabian Sting

Mastering the politics of innovation
By Lameez Alexander

Why impulsive behaviour may be good for your health
By Monika Lisjak and Angela Y. Lee

The business school that thinks and lives in the future
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Introduction

An entrepreneurial mindset is not enough

Whether as senior executives, economists, management scholars or as politicians, we all fully appreciate that entrepreneurship is good for business. However, for entrepreneurship to be the economic growth engine and job and wealth creator that we acknowledge it is, it has to be done well. Just encouraging entrepreneurship at a local or national level is not enough.

As a nation, the Netherlands does reasonably well when it comes to entrepreneurship. According to the GEM/WEF report *Leveraging Entrepreneurial Ambition and Innovation: A Global Perspective on Entrepreneurship 2015*, the Netherlands ranks sixth out of 44 sample economies globally and is categorised as having high competitiveness.

As encouraging as that sounds, the reality is that entrepreneurial ventures in the Netherlands do not grow very quickly and they offer very little in the way of radically new products and business models. What's more, as a nation we don't do very well when it comes to intrapreneurship in large firms. Clearly, our approach to entrepreneurship needs to change.

In this issue of *RSM Discovery*, we offer a number of research-based articles to help boost business growth, innovation and intrapreneurship. We report on how the Erasmus Centre for Data Science and Business Analytics is helping firms extract the greatest commercial benefit from the data they collect. Fabian Sting explains the ways in which it's possible for firms to speed up new product development projects, while Lameez Alexander explains how understanding the political dynamic that typically exists between innovation teams and managers eager to get a product to market can be used to great advantage.

Additionally, readers will find that the other articles in this issue – on preventing managerial unfairness; how diversity in top management teams can improve acquisitions; why predicting the past can prevent future financial crises, and why it is that giving in to impulse purchases can lead to healthier decisions – offer fascinating management insights that will be of genuine practical value to growth-oriented organisations.

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Pretty much every modern organisation collects a mountain of data on a daily basis as it goes about its business. But all that data is of little real value unless it is properly analysed and used to anticipate client behaviour and needs.

The centre is headed jointly by Jan van Dalen, associate professor at RSM’s Department of Technology and Operations Management, and Dennis Fok, an endowed professor of applied econometrics at ESE’s Econometric Institute. The key participants hail from the Technology and Operations Management Department of RSM, the Econometric Institute at ESE, and from both schools’ Marketing departments.

By involving a variety of parties the centre is able to pool the expertise of a range of scientific disciplines, from business information management, marketing and econometrics, to innovation management and business strategy. The services it is able to offer can be applied everywhere from e-commerce and supply chain management, to transport solutions and HR.

Benefiting business
How exactly can the centre benefit an entrepreneurial business person?
‘We have extensive knowledge about, and experience in, the extraction of information from databases, and its application in decision making, in situations where the data might be in many different forms, such as sensor data, transaction data about customer purchases, data about web traffic, or data in the form of written text (eg, online reviews, tweets, blogs and more),’ Jan van Dalen explains. ‘Secondly, the centre has insight into the manifold managerial uses of data. By showcasing our projects and being in contact with companies and other organisations, we also create awareness of the potential of data science in organisational...’
Boosting business with data analysis (continued)

**Tim Skelton** talks with Jan van Dalen and Dennis Fok

context. Last, but by no means least, the centre provides a platform where people can come together to share knowledge and experience.

The data science chain can be divided into three general areas. The first concerns the information technology infrastructure necessary to collect and store large quantities of data. The second deals with the analysis of the data gathered. Then there is the integration of data science into businesses and organisations. ‘What sets us apart is that our focus is on the latter two aspects,’ Dennis Fok points out. ‘Some other active centres have a stronger IT focus. By and large we treat the IT infrastructure as a given, and focus on obtaining business value from the data. This not only requires analytics and modelling, but also knowledge about the management of organisations.’

This translation of data into true business value requires many more skills than simply organising information technology. Data analysis also requires strong skills in statistics and/or econometrics. ‘It’s not very difficult to create reports by straightforwardly summarising data. However, using the data to identify patterns or to predict future events is far more challenging, and also much more valuable,’ Dennis says. ‘Moreover, incorporating the data science way of thinking into organisations is not at all trivial.’

Various reasons complicate this, he says. It may be that organisations simply have insufficient access to skilled personnel. But even when they do, organisational structure and routines may prevent them from reaping the benefits of data support. Many well-known large companies struggle to achieve this.

The centre is and has been involved in a wide range of projects. These include an analysis of smart card data on behalf of the Dutch railway operator, NS, in order to predict peaks in customer travel behaviour and align these with infrastructure capacity; and developing learning agents for flower auctioneers FloraHolland, to optimise auction design by predicting customer bidding behaviour.

In another project, the centre worked on a predictive model to predict the occurrence of online purchases of individual consumers. ‘Such a model is valuable in a context in which consumers tend to make repeat purchases, for example purchases at an online retailer,’ Dennis comments.

‘Such a retailer will have a large database of the transactions made by all customers in the past. Our model can be used to do a variety of things. For example, it can be used to help answer questions such as which of all our past customers should we consider to be active customers.’ This, he adds, is especially valuable, as many customers will have stopped buying at the retailer. ‘Marketing actions should of course be tailored towards the actual status of a consumer. For currently inactive customers one could design a win-back strategy, whereas active customers may be persuaded to purchase more.’

**Urban knowledge**

Besides its interest in businesses, the centre also benefits other organisations such as municipalities. ‘One project we currently work on deals with data science in an urban context,’ Jan says. ‘In collaboration with the City of Rotterdam, we established the Urban Big Data knowledge lab, which is aimed at the use of urban data to support decision making in the areas of public health, economic processes, governance and culture.’

The urban knowledge lab is particularly noteworthy in that is

“By showcasing our projects and being in contact with companies and other organisations, we also create awareness of the potential of data science in organisational contexts.”

Jan van Dalen, scientific co-director, Erasmus Centre for Data Science and Business Analytics.

“By showcasing our projects and being in contact with companies and other organisations, we also create awareness of the potential of data science in organisational contexts.”

Jan van Dalen, scientific co-director, Erasmus Centre for Data Science and Business Analytics.
a cross-campus initiative that involves far more partners at Erasmus University than just RSM and ESE. It was co-founded by the Faculty of Social Science (FSS also and leads the centre’s LDE Bold Cities collaboration), and it also taps into the expertise of the Erasmus Medical School (EMC), and the Erasmus School of History Culture and Communication (ESHCC).

The lab’s focus is on the use of large and real-time data in urban contexts. ‘Social media, for instance, can be used by cities to have near real time information about urgent issues, like crime, road damage, or problems in neighbourhoods, and, more importantly, to act on this information,’ Jan explains. ‘Sensors in the urban road infrastructure and otherwise can help to evaluate the consequences of interventions in, for instance, the road network for congestions elsewhere, emissions, and public health. Likewise, detailed data about public transportation linked with socio-demographic data provides insight into the access of target groups, like elderly, to mobility and other urban services.’ Examples like these are relevant for various scientific disciplines, as well as for governmental organisations responsible for public services, policy development, and policy evaluation.

While the centre currently offers no specific courses, other than those taught as part of the regular RSM/ESE curriculum, a data science programme is in development. ‘There will be a post-experience programme, in which the target audience consists of professionals from the industry with field experience,’ Dennis says. The first step towards this will be a summer course on data science, which will be held this June. More information about this will be published on the centre’s website.

And what else does the future hold? As Jan van Dalen explains, the centre’s main goal is to establish long-term strategic collaborations with partners outside the academic world. ‘Currently we are progressing fast towards a collaboration with the City of Rotterdam and with universities in the region of Leiden and Delft,’ he says. ‘In this collaboration, we will study various data challenges that deal with the urban issues and processes, like managing traffic congestion, supporting a city’s cultural attractiveness, or predicting youth unemployment at the neighbourhood level.’

Meanwhile, efforts are also ongoing to develop similar partnerships with businesses. ‘Within these collaborations we intend to contribute by offering courses, developing joint research programmes, and providing advice and data science experience,’ Jan continues. ‘One of our key strengths is our ability to identify the potential of data that may already be available.’

More information about the activities of the Erasmus Centre for Data Science and Business Analytics can be found at [www.erim.eur.nl/dsba/](http://www.erim.eur.nl/dsba/).
Managerial unfairness is not only morally undesirable, it has also been shown to have a negative effect on the bottom line. This is especially the case if such a trend filters down to lower level managers who, in turn, emulate such behaviour. Middle managers are a particularly interesting case in point as senior management may potentially influence them and, in turn, have an impact upon the professional practices of their subordinates.

Creating distance between managerial levels may also play a part in the extent to which middle managers replicate their superiors’ behaviour and decision-making. However, the right balance needs to be struck between healthy distance (so that middle managers are less exposed to questionable practices at the top) and remoteness (so that superiors are not too distant to be sensitive to their needs).

The trickle-down effect

Until now it has been widely supposed that questionable decision-making and treatment of employees by senior management will be replicated by those lower down the ladder. This “assimilation effect” is based upon the assumption that middle managers view their superiors as role models. As part of their desire to serve, they end up aping some of the behaviour and practices they see above them.

Whilst it is probably true that ethical leadership tends to breed ethical behaviour lower down, it is surely too simplistic to deduce that unethical leadership will trickle down to subordinates.
and subsequently bring out the worst in them. The alternative scenario sees middle managers reacting against what they perceive to be poor or unfair senior managerial practice.

Whilst they may not openly contest the behaviour they see at the top, they may intentionally seek a fairer approach when dealing with people hierarchically beneath them. However, to understand this contrasting behaviour requires a deeper investigation of the factors that can trigger it. New research indicates that managerial self-image and physical distance are crucial in this respect.

**Forming a self-image**

People base their self-image to varying extents upon their relations with other people within an organisation – who you feel close to can affect how you understand yourself. Our research indicates that self-image has a substantial impact on how middle managers respond to leader unfairness.

Known as “relational-interdependent self-construal”, this phenomenon can be embedded into the hierarchical context of working within a company with other people. For example, lower level managers may be more or less inclined to define themselves in terms of their relation to their higher-level managers. A middle manager who identifies strongly with their manager may for instance describe themselves as “part of my manager’s team”. A manager who does not so strongly identify with the manager will be less likely to have their relationship with the superior as part of the self-definition.

The level of relational-interdependent self-construal can impact the extent to which people emulate the behaviour of others, good or bad. High relational-interdependent self-construal (high identifiers) are likely to emulate other people's behaviour. For this to happen, people must perceive a certain similarity with those others in order to then replicate their behaviour.

By contrast, it is less likely that, for example, a middle manager within a company would aim to mirror the questionable actions of a hierarchical superior with whom they felt little connection and not much in common. It is for this reason that recent research activity has sought to make the connection between relational-interdependent self-construal and the likelihood of unfair managerial practice being replicated.

**Physical distance**

Physical distance is an antecedent to relational-interdependent self-construal. The reason for this is that, on the whole, people are less likely to find a similarity with someone located farther afield. Hence, in general, middle managers are less likely to be inclined to emulate the behaviour of superiors that are farther away – located in another building, city or country. Our research shows that this is mainly important when superiors act in undesirable ways.

Recent research activity has shown distance and relational-interdependent self-construal to affect the way in which people respond to high-level unfairness. A wide-ranging, multi-part study examining the reactions of undergraduate populations as well as currently active professionals has delved into this issue from a variety of angles.

These include the importance of relations with a team leader to self-image, the creation of distance via a network set-up, the fairness of hierarchical superiors during annual pay negotiations, and reactions to the distribution of tasks by supervisors.

Results all point in the same direction: undesirable behaviour at the top is contrasted by middle managers relatively far away (they become more fair), but assimilated by those closer to the top.
Keeping a healthy distance from senior management (continued)

By Gijs van Houwelingen

research shows how important it is to create a physical work environment that suits the needs of the organisation and its employees – significant enough distance to reduce the chances of bad practices filtering down but not so large a distance as to make senior management appear remote.

Company heads therefore need to think twice when considering increasingly virtual, physically distant professional set-ups or when planning to expand on a geographical level.

In companies where leadership is very much “by example” (implying that senior management act as role models), creating physical distance will reduce the chances of such an approach being successful. On the other hand, distance also offers certain advantages as it reduces the chance of unfair behaviour spreading within an organisation. Finding a happy medium between the two scenarios is the challenge.

On a theoretical level, the interrelation of the physical and the psychological is worthy of deeper investigation beyond the notion of distance. For example, it has been suggested that a darker workplace can induce less ethical behaviour from employees. How this and other aspects of the working environment can influence professional behaviour remains to be seen.

In addition, most research activity has so far concentrated on the response of individuals to their superiors, in the “follower” mode. However, who is to say that many people within the workplace are not just as, if not more, impacted by the behaviour of those beneath them?

These and other points deserve continued consideration and exploration. However, the crucial lessons to emerge so far are that distance need not be a bad thing in order to do business effectively. Above all, senior managers need to strike a balance between leading by example and creating the right conditions for their “followers” to also enjoy a degree of autonomy and a healthy distance from goings-on at the top, especially when some of those goings-on are viewed in a dim light.

This article draws its inspiration from the paper Fairness Enactment as Response to Higher Level Unfairness: The Roles of Self-Construal and Spatial Distance, written by Gijs van Houwelingen, Marius van Dijke and David De Cremer and published in the Journal of Management, April 16, 2014. DOI: http://dx.doi.org/10.1177/0149206314530166

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“...the implications of this phenomenon underscore the importance to strike the right balance between distance and remoteness.”
Top management team diversity affects acquisition success

By Anna Nadolska

The lack of diversity on a listed company's executive board can have a beneficial impact on that company's growth by mergers and acquisitions (M&A). That benefit, though, comes with an associated cost that is not immediately obvious.

“We found that organisations do indeed learn and do so through the members of their Top Management Teams.”

Although homogenous boards can be shown to reach agreement on corporate strategy and tactics quickly, enabling them to grow rapidly through the medium of M&A, they extract added value less quickly from their new acquisitions than do those buying companies whose boards are more diverse.

These arresting, almost counter-intuitive, findings derive from the research that I carried out in the preparation of my paper Good Learners: How Top Management Teams Affect The Success and Frequency of Acquisitions, co-authored with Prof. Harry Barkema of the London School of Economics and Rotterdam School of Management.

In this paper, we set out to develop new theory and hypotheses on how a firm's top management team learns from acquisition experience; why, in consequence, the composition of the team is crucial, and how this affects acquisition frequency and success.

We focus on the diversity of the top team and argue that heterogeneous teams, as compared to homogenous ones, acquire less but benefit more from their acquisition experience and are more successful with their acquisitions because they avoid mis-transferring their experiences.

We tested our hypotheses on acquisition frequency and success using longitudinal data on more than 2,000 acquisitions by 25 Dutch companies over four decades (1966 to 2006). These companies were active in a wide variety of industries, including paper and packaging, office equipment, pharmaceutical and chemical products, food products, brewing, retailing, trading and tank storage, and printing and publishing.

The sample companies made 2,036 acquisitions, of which 406 were divested over the 40-year period. We found that organisations do indeed learn and do so through the members of their Top Management Teams (TMTs). However, the extent of an organisation’s learning depends on TMT composition.

I believe that there are lessons to be learnt that go beyond the merely academic and can be translated into day-to-day corporate activity, rendering...
Top management team diversity affects acquisition success

By Anna Nadolska

future mergers and acquisitions more successful than they have traditionally been. The starting point was a desire to try and answer some long-standing questions. Do organisations learn from their acquisition experiences? Who learns from acquisition experience? What conditions stimulate learning?

Research is confusing on this point. Anecdotal evidence from M&A observers (rather than from advisers or corporate practitioners) suggests that only around 35-40 per cent of all M&A activity can be considered successful in delivering value to the buyer and its stakeholders; the other 60-65 per cent fail.

This helps explain the old adage which advises that when a new bid is announced it is more profitable to sell shares in the bidder and buy shares in the target. The £1.7 billion offer for TSB announced on 12 March by Spanish bank Sabadell provides up to date evidence of the soundness of the adage. TSB’s share price quickly rose by more than 25 per cent while the Sabadell price fell by 8.2 per cent.

Some companies, we found, actually performed worse the more they acquired. It is probably safe to say that some companies do learn while others do not. There are a number of clear questions that companies should always ask before they launch an acquisition. What are we really buying? Customers? Competition? Cost economics? Capabilities?

What is the target’s stand-alone value? The would-be buyer should assess the value of the target company without taking into account synergies and assess the following elements for fit. Where are the synergies - and the skeletons? The buyer should assess the type of synergies to be expected – cost-reducing or value enhancing – and determine how much costs are associated with achieving them. The buyer needs to take into account negative synergies and, arguably most importantly, to set a walk-away price. That is, determine a maximum price to be paid and stick to it.

Corporate history is, however, littered with evidence demonstrating that after hubris almost inevitably comes nemesis. For a recent example, we need look no further than the spectacular fall from grace of The Royal Bank of Scotland under the leadership of a man who clearly thought he had discovered the philosopher’s stone for the banking industry. RBS had the option of walking away from its proposed purchase of ABN AMRO when markets started to sour in 2007 but didn’t. Other notable disasters featuring in top 10 bad deal lists include AOL/Time Warner and HSBC/Household.

Why, then, is it so difficult to learn from acquisitions and how can learning be made easier? In short, what makes an acquisition successful? An examination of the decision makers throws up interesting results, which suggest that the acquisition models pursued by high-profile chief executive officers believing in the cult of their own personality is not the optimum path for a company to pursue.

Collective decision-making based on the input of the entire TMT is more likely to deliver a balanced outcome than a decision based on the absolute certainty of a single individual’s self-belief. This can apply even if the size of the TMT is relatively small; even in cases where an acquisition does not deliver the expected benefits, the decision to proceed with the purchase will have been a more considered one for which responsibility will be shared by a team rather than shouldered by one person whose judgment might have been clouded.

The value of diversity

Of greater importance than size is the extent of the diversity of the management team. We focused on two measures of diversity. One, diversity of tenure: the length of service of each board member at the company will affect strategic and tactical thinking. Two, diversity of education, which could otherwise be described as taking into account the value of diversity.

‘...the acquisition models pursued by high-profile chief executive officers believing in the cult of their own personality is not the optimum path for a company to pursue.’
Diverse teams are also relatively less likely to mistakenly generalise and mis-transfer lessons from previous acquisition experience. This tendency towards a heightened emphasis on care and reflection will help to deliver a relatively higher acquisition success rate than that achieved by more homogenous teams.

In sum, our theory implies that diverse TMTs will acquire less frequently, but at the same time will acquire more successfully than homogenous teams. In practical terms, if a company decides that it wants to grow fast, it will be better placed to do so if it has a homogenous Top Management Team driving that strategy in similar countries. By contrast, a business strategy that is dependent upon slower acquisition-led growth would be better executed by a heterogeneous team.

When a team can call on diverse memory and experience and is inclined to discuss differences, it will make better use of the richness of the experience that resides within it.


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Predicting the past to avoid financial crises

By Philip Fliers

It is often said that people who fail to learn the lessons of history are fated to repeat it, both at the micro and the macro level. Many will argue that the assertion is as true of the banking industry as any other field of human activity.

I personally would argue that the disastrous financial events which began to unfold in July 2007 when the asset-backed commercial paper in the USA began to dry up, and gained momentum with the collapse of Lehman Brothers in September the following year, could have been avoided by learning from our financial past. At the very least, the scale of the impact of what has come to be known as the Global Financial Crisis could have been much reduced.

“I make my case based on the research conducted for the paper Predicting the past: Understanding the causes of bank distress in the Netherlands in the 1920s, which I co-wrote with Chris Colvin of Queen’s Management School, Queen’s University Belfast, and Abe de Jong, Professor of Corporate Finance and Corporate Governance, at Rotterdam School of Management, Erasmus University.

A brief history lesson would probably be helpful as not everyone will be immediately familiar with the specifics of Dutch financial history dating back almost a century. Dutch businesses benefited greatly from the First World War, a conflict in which the Netherlands remained neutral. A short post-war boom prolonged their prosperity.

Then, in the early 1920s, the Dutch economy suffered a sharp deflationary recession. It is against this macroeconomic backdrop that the financial crises of the day broke out. The large and sustained declines in aggregate demand and prices sustained in the 1920s were the consequence of falling export demand and monetary policy due to the gold standard. Debt deflation put pressure both on Dutch businesses and on the banking sector that they had come to rely on. Instability for banks has since been widely classified as constituting a financial crisis.

In our research, which is built on an extensive quantitative archival reconstruction of the financial sector at the time of the crisis, we found that banks that failed were more highly valued before the crisis than those that did not.

In the paper, we do not try to draw a literal comparison between the two separate crises, but there are clear similarities. For the median bank, for each percentage increase in leverage, we found that the probability of banks’ distress increases by about 50 per cent, showing that lower equity buffers make banks vulnerable to shocks.

This might sound horribly familiar to readers who are acquainted with the details of today’s continuing global financial instability.

But equally there are clear differences. In the 1920s, for instance, there was no expectation among investors and bankers of government or central bank intervention. Struggling banks had little option but to resolve their own problems, either by addressing their lack of liquidity, by merging with or being acquired by another bank, or by going bankrupt. As a result, the crisis of the 1920s cost taxpayers significantly less than the more recent events, an estimated €1bn-€2bn in today’s terms.

Moral hazard

As the financial industry, governments, central banks and regulators strive to return to “normal”, but demonstrate that they have learnt from the
experience, one vital must-have change is surely a revaluation of moral hazard. But what exactly is “moral hazard”? Put simply, it relates to consequences that arise from the certain knowledge that big banks have that however badly they conduct their business, however much they abuse the principles of sound banking in order to boost profits and the remuneration of those chasing profit, central banks and government will ride to their rescue as the ultimate lenders of last resort.

It is a phrase that has been leached of all resonance by overuse in the past few years, and is almost impossible to explain to even well-educated lay people. Perhaps we can turn to popular culture for an easier to understand analogy. For example, it has been argued on more than one occasion that Superman’s girlfriend Lois Lane repeatedly finds herself in far riskier situations than her peer group because of her unerringly faith that whatever happens, her super-powered boyfriend will swoop to her rescue. This Lois Lane Syndrome is moral hazard by another name.

If not eliminated, this phenomenon must at least be severely reduced in its impact. But for that to happen there has to be a change in the mindset of central banks and their governments. If Lois Lane can be chastised for taking on more risk than she ought to, she can in turn defend herself by arguing that she never asked for Superman to provide her with constant protection. For Superman, read central banks and governments.

The insistence of central banks and governments on riding to the rescue is very much part of the problem rather than a solution. Banks that find themselves in trouble because of their own business strategy and tactics should, as far as possible, be allowed to go bust. Unless the needs of the public outweigh the risks and costs involved in propping them up.

If moral hazard is to be neutered as a threat to national and international banking systems, central banks and governments must discipline themselves. They must instead learn to let market events and thus financial evolution take their natural course.

The paper Predicting the past: Understanding the causes of bank distress in the Netherlands in the 1920s, by Christopher L. Colvin, Abe de Jong and Philip T. Fliers, appeared in the journal Explorations in Economic History, Volume 55, January 2015, Pages 97–121. DOI: http://dx.doi.org/10.1016/j.eeh.2014.09.001

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Encouraging help speeds up product development projects

By Fabian Sting

Ensuring new product development projects stay on track is challenging at the best of times. Part of the problem can lie with how project team members behave and communicate. However, a novel approach that triggers help for problems is successfully overcoming such behavioural difficulties and encouraging greater team cooperation.

Every business school student learns about lean management and lean manufacturing, the process optimisation methodology that has sucked billions of dollars of waste out of all kinds of complex systems.

Applied well, Lean can move mountains. From factories to hospitals, many organisations run better and cheaper thanks to Lean. It has one serious limitation, however: it is meant to streamline repetitive processes and reduce deviations that veer away from a clear standard – and these days, the most challenging work involves neither. We spend our careers executing one-off projects that are never quite the same thing twice.

The end result is often a colossal, seemingly unavoidable amount of wasted time and energy. At extremes, it can lead to a disaster, like Microsoft’s Vista software, which the company estimated would take two years to complete, but actually took five, or Airbus’s development of the A380 super jumbo, where French and German engineers developed incompatible wirings that led to severe production and delivery delays.

Of course, innovation entails some goose chasing, but a surprising amount of the waste appears to stem from the guarded way teams often communicate: you ask your report how long they will need to complete an assignment. They say three days, though secretly thinking it will take two – and then in the end the person either makes the work fit the time or gives you a nasty surprise when a week has rolled by and red-faced, they tell you there’s a problem. Worse, they may meet their deadline by papering over the flaw and sending it down the line, where it will be uncovered after it has become much more expensive to correct.

But how do you change this “padding” behaviour? After all, from the employee’s point of view, not telling your boss what you truly believe may be perfectly rational: speaking frankly may lead to various punishments – less interesting assignments, loss of face with your peers, maybe even a lost job.

Red cards

A German company appears to have found a solution: engineers at Roto Frank, a manufacturer of windows and solar systems headquartered in Leinfelden-Echterdingen, Germany, have learned how to get out of this bind with just a little red square of card.

Christoph H. Loch, director of the Judge Business School at the University of Cambridge, and Dirk Stempfhuber, head of engineering at Roto Frank Bauelemente GmbH, in Bad Mergentheim, Germany, and I recently completed a study of the red card system developed by Dirk and his colleagues in the New Product Development (NPD) department of Roto’s Roof and Solar Technology division.

When Roto began to work out this system in 2009, NPD had 25 development engineers, who at any given time were working on 21 projects with seven more in the pipeline. His group designs (rather high-tech) roof window systems. Calling these systems windows is almost a misnomer: these complex pieces of machinery have roughly 200 parts, about the same number as a dishwasher.

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At an internal workshop, Stempfhuber was asked if they visualised their workflow – a key tenet of Lean. At first, he said yes, remembering a big control chart in one of their meeting rooms, but then he realised that his engineers did not actually keep it up to date. Often, project managers went directly to the engineers to find out what was really going on.

To make the process more visual, he decided to give each engineer a smaller chart he could put up near his desk, on which he would write what he intended to do each day of the week, along with a green card if everything was on schedule and a red card if a critical task was on the verge of being late.

The choice of red as the warning card colour was unfortunate – in football, a red card thrown by the referee signals that a player is expelled from the game – and Stempfhuber realized his engineers needed some reassurance, particularly as German engineers tend to take a lot of pride in their problem-solving ability.

To encourage participation (and so the use of red cards), he promised that anyone who raised a red card would not be criticised and would receive help from a supervisor within 30 minutes. If a solution couldn’t be found immediately, the management would pull together “a red card team” of engineers knowledgeable about areas related to the given problem and together they would work out a solution.

A little help from their friends

Feeling more secure, his engineers adopted the system. Between 2009 and 2012, the number of late changes fell from 6 to 3, the cost of those late changes fell from €60,000 to €27,000, and the number of milestone delays on important projects dropped from 30 to 11. In sum, the system improved project performance drastically.

Our interviews with NPD engineers suggest that Roto’s process encouraged them to view the red cards as a support mechanism, not a punishment. Without fear of blame, they were more inclined to call on their colleagues for help rather than to procrastinate or pass latent problems on to a colleague. As help was exchanged in multiple directions, mutual understanding among project engineers increased. They also felt good about being invited to participate on a red card team, and even began to use it as something that they could point out to their boss when they had a review.

Now, we’re trying (in collaboration with Pascale Crama and Yaozhong Wu*) to find out more about whether this system can work elsewhere, by developing a game theoretic model explaining how the system reaps the benefits of help to manage uncertainty while discouraging free riders from taking advantage of their colleagues’ support. In doing so we aim to find out whether it can work in other contexts, such as in project environments with different risk and cost characteristics.

* Sting, Fabian J., Crama, Pascale, and Yaozhong Wu (2013), How (and When) to Encourage Cooperation Across Projects? Working Paper, Erasmus University Rotterdam


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There are two types of stories that explain the process of innovation. The first is the story of a team of underdogs who had an idea, fought people who said it couldn’t be done, and triumphed in the end. The second kind tends to feature a lot of boxes, arrows and light bulbs.
that actually works, and secondly, the political power and persuasive ability to sell that idea to the rest of the organisation. Few people have both skills, but to succeed, you need both.

Sooner or later, your teams won't get along. Disputes between the inventors and managers over ownership of an idea is a natural part of the innovation process. Expect it, make time for it, and try to strike some sort of compromise. If either the managers or the inventors are winners, the odds are good your idea won’t be. Managers should make sure that the innovation team doesn’t feel entirely shunted aside. Frustrating their sense of ownership completely is an excellent way to prevent more good ideas.

Don’t trust the models. When it comes to innovation, models should be taken with several pinches of salt. Unless the innovation is very minor, it’s likely to prove very resistant to the box-and-arrow treatment. Innovations are so often the result of various kinds of accidents – a misunderstood instruction, the wrong chemical mixed in the wrong formula at the wrong time, or an executive sponsor’s irresponsible obsession – that I’ve actually become sceptical of any theory about how they might arise.

Question your questions. Your own preconceptions limit what you can see, because it’s easy to ask questions that just confirm what your model says you should see. The main reason I was able to see innovation in this new way is that I came to this study by way of my earlier work in social psychology, which made it possible for me to see a political dynamic whereas the more technically focused scholars who preceded me saw only technical challenges.

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This article draws its inspiration from Lameez Alexander’s PhD thesis, *People, Politics, and Innovation: A process perspective*. It can be downloaded at: http://repub.eur.nl/pub/77209

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Why impulsive behaviour may be good for your health

By Monika Lisjak and Angela Y. Lee

Just as we can give in to our oh-so guilty impulses in moments of weakness, new research shows that under the right circumstances these impulses can in fact lead us to engage in behaviour that is actually more conducive to our health.

Extended periods of self-control are often immediately followed by an increased tendency toward acts of impulse. This is not only well documented but also intuitive. Resisting the temptation to buy a chocolate cake, making product choices, and keeping track of the amount spent to stay within budget are all activities we engage in when grocery shopping and which require self-control.

After we engage in these activities we often feel worn out, and are more likely to behave impulsively afterwards. Indeed, you may have noticed that by the time we reach the checkout at a supermarket, we are more susceptible to impulse purchases, as retail product placement experts – and confectionary manufacturers – are well aware.

But there is an interesting flipside to this tendency. Under the right conditions, a shopper standing at the checkout may be just as likely to impulsively buy health-supporting vitamin supplements as they are to reach for a sweet treat. It is this self-preserving impulse that prompts people to make healthy decisions that we explored in our paper, The bright side of impulse: depletion heightens self-protective behaviour in the face of danger.

We usually think of impulsive behaviour as something maladaptive that will lead to greater personal risk. However, impulsive and reckless are different things, despite often being used interchangeably. Our study indicates that the human tendency to give in to impulse following a period of self-control can actually lead to healthier decisions that reduce personal risk.

**Overriding impulses**

When a person forces themselves to override impulse, they become depleted. Ordering a salad when impulse suggests that chocolate cake is the superior choice; choosing a fuel-efficient car when impulse decrees that the pretty red sports car is the most desirable; staying up late into the night finishing an essay when the impulse is to abandon the project and go to sleep. These situations may seem very different at first glance but each requires people to override their impulses, putting them into a state of depletion. A depleted individual feels more vulnerable than a non-depleted person when danger is perceived in the environment.

Depletion happens relatively quickly, and it then becomes important to replenish our limited reserves. Replenishment occurs when we rest, eat, or have a little fun. We become re-energised and more carefree. The crucial period between depletion and replenishment is when impulsive behaviour is most likely to be displayed. However, this impulsive behaviour is not always of the kind we immediately think of – over-eating, drinking, or spending excessively. Instead, impulsive behaviour can also be aimed at preserving physical safety and health, and more broadly protect us against danger.

Indeed, we show that when depleted people are faced with health risk, their self-protective impulse kicks in, which makes them behave in more healthful ways. The implication is that being depleted (and therefore impulsive) may ironically help us make decisions that are more in line with our health goals when risk looms.

In one of our experiments, we recruited respondents from the general population and asked them to read a health message describing the dangers of a medical condition (kidney disease) and advocating the virtues of early detection of that disease. The objective of the message was to persuade the recipients to get tested for kidney problems. The message also highlighted the risk associated with having a family history of the condition.

The study showed that amongst participants with a family history of the disease, those who were depleted reported feeling more vulnerable and expressed greater intentions to get tested relative to those who were not.
depleted. However, among participants with no family history for that disease, depleted and non-depleted participants did not differ in their low perceptions of vulnerability and intention to get tested.

In another experiment, depleted individuals were more likely to opt for a laptop that incorporated significant safety-related features during product assessment than their non-depleted counterparts.

It is important to note that we studied perceived physical risk, rather than an emotionally stressful situation like the fear of losing one’s job. This means that speculation on how depletion relates to emotional risk and interpersonal relationships is just that – speculation. However, our study supports some interesting existing literature that suggests depletion (and replenishment) may play a strong role in workplace decision-making.

One such example in the existing literature concerns the decisions made by judges as to whether or not a prisoner will be released. Early in the morning, when the judge was fresh, more prisoners were deemed worthy of release. Just before lunch when the judge was depleted, fewer prisoners were released as the judge’s impulsive behaviour veered toward preserving public safety.

After the lunch break (and the replenishment that comes with food and rest), release numbers rebounded. Clearly this is not a conscious decision but rather is one borne out of an impulsive desire to create a physically safe environment. This observation is

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Why impulsive behaviour may be good for your health

By Monika Lisjak and Angela Y. Lee

“Our conclusions support the actions of our hypothetical shopper who is just as likely to reach for vitamins as chocolate”.

supported by our own research and may have far-ranging implications for any profession that deals with large sums of money or high-impact human scenarios like justice and possibly medicine.

Marketers take note

Based on our research, marketers of pharmaceutical products may be well served by understanding the peak times for depletion. We offered gym-goers a choice of sunblock or moisturiser as a small gift in exchange for participating in our survey. Depleted participants who had just finished their workout were more likely to choose the safety-related product (sunblock) than non-depleted participants who had yet to begin their workout. Our conclusions support the actions of our hypothetical shopper who is just as likely to reach for vitamins as chocolate.

Marketers of safety- and health-related products and services may choose to air their advertisements at a time of day when a consumer is most likely to have just arrived home from work or school, depleted, but before they have replenished their reserves with rest, food and fun.

Where to from here?

The basic principle of a depleted person being prone to self-preserving impulsive behaviour when risk is perceived opens up a number of interesting questions: what differences in this type of behaviour might be observed among differing age groups, genders and cultural backgrounds? Is it possible that the impulse to protect oneself would apply not only to situations involving physical risk but also social/emotional risk?

Should those working in the fields of law, medicine, aviation, and high finance encourage their staff (and themselves) to maintain an awareness of the correct balance between depletion and replenishment in order to ensure consistent decision-making? Should investors interested in high-risk, high-return stock market plays ask their brokers to handle their account only in the morning, before depletion occurs? If depletion leads to safer, more conservative decisions, what is the optimum balance?

It would be unreasonable for us to offer answers to these questions based on a single investigation. We can however invite the reader to draw their own conclusions, and to look forward to a time when research might be able to address some of these questions.


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