

## SMART or Not: Are Simple Management Recipes Useful to Improve Performance in a Complex World?

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### Abstract

This paper provides a critical reflection of widely used concept of SMART goals (the idea that for better performance purposes the objectives should be specific, measurable, agreed, realistic and time-related) as required in the EU Financial Regulation. The origin of this concept is investigated and its main features are confronted with relevant research in the area of (i) goal setting theory, (ii) recent evidence and explanation of perverse effects of “target game” like gaming or cheating and implications to measurement and the idea of verifiability, (iii) self-determination theory and links to intrinsic and extrinsic motivation and (iv) complexity theory. The paper concludes that SMART goals are relevant approach, but only when used on the level of individuals and accompanied by proper feedback and support mechanism. This is in clear contrast with the widespread (mis)use of this concept at the level of organizations.

**The European Commission’s Financial Regulation requires in Art. 30 that “specific, measurable, achievable, relevant and timed objectives shall be set for all sectors of activity covered by the budget.”<sup>1</sup> It can be**

<sup>1</sup> REGULATION (EU, EURATOM) No 966/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002. Accessed from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:298:0001:0096:EN:PDF> on 17/3/2015

**expected that EU member states will follow this example. But how smart would this really be?**

This paper will explore the issue of widely used concept of SMART goals (the idea that for better performance purposes the objectives should be specific, measurable, agreed or achievable, realistic and time-related) by drawing on a variety of existing research results.

The scope of this paper is limited to the critical reflection of SMART. While it identifies conditions when this concept can actually be beneficial, it is not intended to provide just another ready-to-apply simple recipe for organizations or operational programmes dealing with some of the most complex societal problems. The reader looking for deeper understanding of organizational performance can also refer e.g. to Simons (1999)<sup>2</sup> or Seddon (2010)<sup>3</sup>.

### Keywords

SMART, goal setting, performance measurement, motivation, complexity, gaming, cheating

### The early days of SMART

First, it may be useful to determine where the idea of SMART came from in the first place. The article that may have been the first to use this acronym was written by consultant G. Doran in 1981<sup>4</sup>. He defined it as follows:

- specific: target a specific area for improvement;
- measurable: quantify or at least suggest an indicator of progress;
- assignable: specify who will do it;
- realistic: state what results can be realistically achieved, given available resources;
- time-related: specify when the results can be achieved.

<sup>2</sup> Simons, R. (1999). *Performance Measurement and Control Systems for Implementing Strategy*. Prentice Hall.

<sup>3</sup> Seddon, J. (2010). *Systems Thinking in the Public Sector*. Triarchy Press.

<sup>4</sup> Doran, G. T. (1981). There's a S.M.A.R.T. way to write management's goals and objectives. *Management Review*, Volume 70, Issue 11(AMA FORUM), pp. 35-36.

“Assignable” shifted to “agreed” presumably to avoid too much of a “top-down” connotation. However, more interesting than the acronym itself is that Doran states in the article “...don’t say that all objective must be quantified at all levels of management. In certain situations, it is not realistic to attempt quantification, particularly in staff and middle management positions... It is the combination of the objective and its action plan that is really important.” Doran seems to be making a case that SMART is most useful when applied at a level where action plans are actually formulated and put into effect. Indeed, he also states that “Practicing managers and corporations can lose the benefit of a more abstract objective in order to gain quantification.” Regrettably, Doran is not more explicit on what constitutes this benefit. This point will be addressed further in this paper.

Although the article by Doran was not citing any relevant research, the idea of SMART can be said to have some academic history pre-dating it.

### Goal setting theory: goals matter for performance

A link can be easily made with a research stream that goes under the heading of “goal setting and task motivation theory” associated with mainly with E. Locke and G. Latham who developed the theory over a 25 year period with more than 400 laboratory and field experiments (Locke et al. 2006a<sup>5</sup>). Latham et al. (2002) identify the following elements<sup>6</sup>:

- goals that are specific - defined earlier in Locke et al. (1981, p. 126)<sup>7</sup> as “the degree of quantitative precision with which the aim is specified”- and difficult, lead to higher performance than urging people to do their best:
  - first, this is because goals direct effort and attention to goal relevant action and away from irrelevant ones. This gives rise to the observation that in the face of feed-

<sup>5</sup> Locke, E., Latham, G., (2006a). "New Directions in Goal-Setting Theory", Association for Psychological Science 15 (5): 265–268

<sup>6</sup> Latham, G., Locke, E. A., (2002), "Building a Practically Useful Theory of Goal Setting and Task Motivation", The American Psychologist 57 (9): 705–17

<sup>7</sup> Locke, E. A., Shaw, K. N.; Saari, L. M, Latham, G. P. (1981), "Goal Setting and Task Performance: 1969–1980", Psychological Bulletin (American Psychological Association) 90 (1): 125–152

back, people improve their performance only on those dimensions for which goals had previously been set;

- second, goals have an energizing function, with higher goals prompting to spend more effort;
- third, goals affect persistence of effort (working faster and more intensely in a short period of time or more slowly and less intensely for a prolonged period);
- finally, goals affect action indirectly by discovery and/or use of task relevant knowledge and strategies, where people will either automatically (without thinking about it) use applicable existing knowledge and skills, draw upon knowledge and skills used previously in related contexts, strategies they have been trained in or engage in deliberate planning to develop appropriate strategies to cope with a new task. In the latter case, there may be a time lag between setting a goal and higher performance as people search for the right strategy.

Seijts et al. (2005)<sup>8</sup> add to Latham et al. 2002 by providing an example of “working smarter, not harder” (p.125) concerning the use of existing competencies regarding radio use by truck drivers to coordinate their efforts better.

Latham et al. (2002) state that an exception to this hard, specific goal and performance relation occurs when people have been trained in wrong strategies. Then, it is better to have an easy goal. This makes sense as, in this case, people triggered by a specific, hard goal will be putting extra effort in doing the wrong things.

There are also some conditions that moderate the link between goal setting and performance according to Latham et al. (2002):

- the relation is stronger when people are committed to their goals. This commitment is in turn facilitated by two groups of factors:

<sup>8</sup> Seijts, G. and Latham G. (2005). "Learning Versus Performance Goals: When Should Each Be Used?". Academy of Management Executive. February, pp. 124–131

- those that increase self-efficacy (confidence that one can achieve a goal) which can be raised by leaders e.g. by:
  - ensuring adequate training to increase mastery to provide success experiences;
  - role modeling;
  - persuasive communication that expresses confidence that the person can attain the goal and gives information on relevant task strategies to do so. When assigning a goal (rather than letting someone set their own goal) to someone implicitly expresses this confidence, then this has a similar effect of raising self-efficacy. Related to this, positive feed-back (see below) positively affects self-efficacy. On the other hand, incentive systems may lower self-efficacy (see below);
- those that convince people of the importance of a goal e.g.:
  - by making a public commitment to the goal;
  - by having leaders communicate an inspiring vision and behaving supportively;
  - by allowing subordinates to participate in setting goals. It is however stated that assigned goals are as effective as goals set participatively, provided that the assigned goal is accompanied with a purpose or rationale (versus a "Do this..." command). The benefit of participation is reported to be cognitive rather than motivational as it stimulates information exchange relating to task strategies (already mentioned above). Locke et al. (2006b)<sup>9</sup> add that this in turn increases self-efficacy;
  - by using monetary incentives where more money gains more commitment (Latham et al. (2002)). Locke et al. (2006b) adds that praise and public recognition like money exert an effect on performance by leading to more commitment. However, the way incentives are deployed is very important. The article mentions how a task and bonus system (where a bonus is paid when an absolute level of performance is reached rather than

<sup>9</sup> Latham, G. and Locke, E., (2006b). "Enhancing the Benefits and Overcoming the Pitfalls of Goal Setting", *Organizational Dynamics*. Vol. 35, no. 4, pp. 332-340

paying for increments) negatively affects self-efficacy and hence performance when people realize they will not be able to achieve a goal.

Latham et al. (2002) state that the relation is also stronger if feedback is given that reveals progress in relation to the set goals:

- if people find out they are below target, they generally increase effort or try a new strategy as goal setting is a discrepancy creating process;
- however, the existing level of self-efficacy of a person is key when receiving negative feedback as it will determine if subsequent goals are lowered or raised. Positive feedback of course positively affects self-efficacy;
- if people are given feed-back without any pre-set goals, they will be setting goals in response to the feed-back. This ensuing goal setting – if hard and specific – then provides a link to performance, not the actual initial feed-back.

Higher self-efficacy also is linked to setting higher goals in the first place (which was also stated above to be an effect of participative goal setting via the mechanism of information sharing) and a greater ability to find and use task strategies, constituting two extra elements next to the aforementioned moderation of commitment and the response to feedback. Locke et al. (2006b) add that praise and public recognition affect setting higher goals and hence performance because they affect self-efficacy (as a feedback mechanism) next to affecting commitment as stated earlier.

Importantly, according to Latham et al. (2002), when the limits of ability are reached, the relation between high specific goals and performance levels off or inverts.

Seijts et al. (2004)<sup>10</sup> also add situational constraints as moderators and mention that there is controversy regarding whether goals are better

<sup>10</sup> Seijts, G. H., Latham, G. P., Tasa, K., Latham, B. W., (2004). "Goal Setting and Goal Orientation: An Integration of Two Different Yet Related Literatures". *The Academy of Management Journal* Vol. 47, No. 2 April, pp. 227-239

predictors of action than are personality traits. Inconsistent findings may be due to goals being a strong variable that attenuates the effect of personality variable as they provide cues to guide behavior and performance expectations that leave little room for variation in work behavior and subsequent performance. An example of a situational constraint is role overload (excess work) as reported in Lock et al. (2006b).

### **Caveats apply to goal setting: it is oriented to individuals and complex tasks require learning goals**

This brings us to two major caveats associated with goal setting theory: that it applies at the level of individuals rather than organizations as a whole and that it requires thinking about learning objectives for more complex tasks. These caveats are treated next in more detail.

First, it is a theory applicable at the level of individuals of an organization, referring to specific tasks they are supposed to execute. Goal setting theory was not developed to be used at the level of an organization as a whole. If an attempt would be made to extrapolate this theory to the organizational level, it would run into trouble when trying to satisfy the requirement to set goals that take into account ability and situational constraints – hence that are hard but realistic. It is virtually impossible at the top of the organization to be able to gauge the ability and situational constraints that are applicable to all the people and all tasks. Trying it anyway would inevitably result in arbitrariness for many people. Ordóñez et al. (2009, p. 15) support this position when they say: “given the variability of performance on any given task, any standard goal set for a group of people will vary in difficulty for individual members, thus the goal will simultaneously be too easy for some and too difficult for others”<sup>11</sup>.

A second caveat is that there is an important exception to the relation between hard, specific goals and performance, according to Latham et al. (2002): when people are confronted with a task that is complex for them, a vague goal sometimes leads to better strategies. This is stated to be because performance goals relating to complex tasks can create so much

<sup>11</sup> Ordóñez, L. D., Schweitzer, M. E., Galinsky, A. D., Bazerman, M. (2009). Goals Gone Wild: The Systematic Side Effects of Over-Prescribing Goal Setting. Harvard Business School Working Paper Number: 09-083

anxiety that people scramble to discover strategies in an unsystematic way and fail to learn what is effective. It is also stated that in dynamic situations, it is important to actively search for feed-back and react quickly to it to attain the goal.

This issue is further researched in a number of publications notably Seijts et al. (2004 and 2005) and Latham et al. (2006b).

Seijts et al. (2004) state that goal setting theory, having its roots in organizational psychology, has been concerned with motivation and hence the tasks used in the research have tended to be straightforward. They require primarily effort and persistence, with ability to execute being pre-established. The importance of ability as a moderating variable was already noted above. However, educational psychology has been much more interested in ability as such and has studied tasks that are complex, where the focus is on acquisition of knowledge and skill. Therefore we need to add as a moderating variable also the complexity of the tasks for which goals are to be set.

Seijts et al. (2004) restate that for complex tasks, where people lack knowledge or skill to perform the task effectively, urging them to set a specific, high goal leads to a decrease of performance rather than an increase. They put forward that this is because before performance routines become automatic, cognitive resources have to be allocated to mastering the task rather than to attaining a specific level of performance. This is a slightly different explanation than the one of increased anxiety offered by Latham et al. (2002) but it is not inconsistent. Rather, a failure to allocate sufficient resources to mastery may well result in anxiety. Both arguments are restated in Seijts et al. (2005). It should also be clear, as stated in Seijts (2005), that when people do possess the competences to enable them to “work smarter, not harder”, when faced with a complex task, goal setting still stimulates finding appropriate strategies, as was already reported above by Latham et al. (2002).

Seijts (2005, p. 126) state that “performance is a function of creative imagination or learning, in addition to sheer effort and persistence. This is particularly true on tasks where the person lacks the requisite knowledge or skill to master it.”

Seijts et al. (2004, p. 229) states: "...tasks that are novel or complex for an individual often require attentional resources for learning what is required to perform well". Seijts et al. (2005, p. 127) add that "tasks for which minimal prior learning or performance routines exist, or tasks where strategies that were once effective suddenly cease to be so, relocate the purpose of or benefit of goal setting from one of primarily motivation to that of knowledge acquisition, environmental scanning, and seeking feed-back". Locke et al. (2006b, p. 334) state "Meta-cognition is particularly necessary in environments with minimal structure or guidance". Meta-cognition refers to processes where people generate solutions to an impasse, implement them and monitor their effectiveness.

Locke et al. (2006b, p. 334) also state "...a learning goal shifts attention to discovery and implementation of task-relevant strategies or procedures and away from task-outcome achievement". Of course, this also means that "for tasks that a person already has the requisite ability to perform effectively, a learning goal that needlessly focuses attention on discovering strategies... has a deleterious effect on performance". The former case focuses on acquisition of ability; the latter should rather focus on motivation.

However, in both cases, the research supports that setting a specific, hard goal is associated with higher performance. A performance goal would e.g. ask to attain 21% market share (a complex task) versus a learning goal that would ask to identify and implement 6 strategies to achieve a higher market share, as stated in Seijts (2004). It should be noted that in the learning goal, the level of market share to be achieved is not quantified; only the amount of learning is. Seijts et al. (2004) put forward that the research in this case shows that more effort is spent on the learning goal than on the performance goal. This is demonstrated to be because commitment to the learning goal was higher due to higher self-efficacy which in turn was due to the fact that those going after the performance goal were not achieving it, while those oriented to the learning goal were. Higher self-efficacy was also reported to relate to higher information seeking and this was in turn related to higher performance.

Locke et al. (2006b) also note that performance goals may have an adverse effect on risk-taking if failure to attain hard, specific goals is punished. The proposed solution is to provide for opportunities to make mistakes and to encourage learning from error. Hence this implies setting learning

objectives. In addition, for learning goals, an appropriate time horizon (spanning perhaps years) is required. This should lead to repeated setting of high learning objectives rather than to less difficult or vague goals.

### And some more caveats...

Next to the theory being applicable primarily to individual rather than organisational goal setting and the need to take into account learning objectives, Locke et al. (2006b) note some other difficulties and provide some suggestions towards resolving them:

- when individuals work in groups, conflicts between individuals in terms of their goals can decrease the performance of the group as a whole. When goals are viewed as competitive, people are more likely to withhold information and ideas from others. The proposed solution is to set a superordinate goal or vision. This is then to be made more concrete by specific, hard goals. According to Locke et al. (2006a) when groups set goals like this, this increases sharing of information where sharing is again related to higher performance;
- the way goals are formulated matters: if they are framed as a threat (do not mess up) rather than a challenge, performance drops. The proposed solution is to frame a goal positively;
- high satisfaction due to goal attainment leads to increasing self-confidence and setting even higher goals. But this can then lead to dysfunctional persistence of previously used strategies if there is a radical change in the environment. Two solutions are proposed:
  - in dynamic situations it is critical to actively seek feedback and react quickly to it. Errors are reduced by reducing a distal goal to proximal sub-goals allowing for an increase in information feed-back relative to only a distal goal;
  - constructive conflict should be promoted to find flaws in a proposed decision. People should be rotated in and out of this role to avoid losing their credibility;

- closely related is the risk that people tie their self-esteem to goal attainment. This leads to putting the goal as such above reality and reason. Whereas the former problem related to dysfunctional persistence of strategies, this one relates to dysfunctional persistence of the goal itself. The proposed solution is to maintain a willingness to adapt among people.

Ordóñez et al. (2009) report a list of warning signs in leaders that become excessively fixated on goals. They associate goals with destiny, express an idealized future, offer goal-driven justifications and attempt to engage in face-saving behavior. These warnings are related to these situations:

- as performance gets progressively higher, it gets progressively more difficult to further increase it. High performers may be punished for their past performance with goals that become impossible to attain. The solution is to allow high performers to set their own goals and strategies to attain them;
- when money is tied to achieving goals, some people will engage in unwanted behavior e.g. overstate their performance (especially if close to the goal). The proposed solution is:
  - do not punish managers as long as some minimum (not hard), standards are respected. These minimum standards should be formulated respective to an agreed upon competitor;
  - use a continuous linear bonus system (based on increments of performance rather than absolute level) as was already suggested earlier;
  - where comprehensive metrics are lacking, judgment on the part of a panel of subject matter experts is required, that explicitly takes into account performance dimensions for which no goals were set (e.g. ethical behavior);
  - furthermore, organizational control systems should be in place and unethical employees should be fired;
- non-goal performance dimensions may stay ignored. The proposed solution is that if these dimensions matter, there should be goals relating to them. The latter solution may however lead

to another problem: proliferation of goals rather than keeping them to a manageable number suggested to be between 3 and 7. It is therefore not a very practical suggestion.

To conclude the section on goal setting theory, the connection with SMART should be clarified: specific, measurable and time related are what goal setting theory referred to earlier as the “degree of quantitative precision with which the aim is specified”. Realistic and assignable are linked to the question whether the person who is performing a task is both competent at the task and not overly constrained by the environment when attempting to execute it.

### **What we measure is what gets done, including by gaming and cheating**

We should now turn to the issue that that gaming and cheating may happen as well as other forms of unintended behavior. These issues are discussed in a research stream that focuses more on measurement issues and their consequences for setting targets in relation to the public service. In this sense, the focus is on the “measurable” part of the SMART acronym.

A comprehensive review of the literature and available evidence provided in 2010 by the Economic and Social Research Council (ESRC) in the UK<sup>12</sup> lists two assumptions to making a target system work: first, measurement problems are not important in the sense that the quantifiable performance indicator adequately represents overall performance. Second, that the system is not vulnerable to gaming. It then states (p. 22): “There is some evidence that targets and such “carrots and sticks” work, particularly if the desired outcome is focused and measurable, as in the case of hospital waiting times. The two assumptions underlying such governance structures don’t hold for public service delivery, however: measurement error is an inherent problem, as is the resultant potential for undesired as well as desired responses, and the evidence bears this out.”

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<sup>12</sup> Wilson, D. (2010), Targets, choice and voice: accountability in public services, ESRC.

Bevan et al. (2006)<sup>13</sup> provide some more details about the difficulties in making targets work. This makes clear that improvement on measures does not equate improvement in real performance. This is due to gaming or “hitting the target and missing the point”, defined as a reactive subversion where targeted performance measures improve but performance where targets do not apply decreases.

They focus on the kind of system where targets are transparent (e.g. published in advance) and so is the performance against them. They list a variety of incentives, such as reputational effects, tenure, “earned autonomy” for high performers, budgetary allocations, demonstrating that these need not always be financial incentives at the level of an individual as addressed above by Locke et al. (2006b). Indeed, OECD (2011, p. 6)<sup>14</sup> also asserts that “...never answered the question what has to happen if output targets are not achieved... In practice we see very few sanctions, but in theory sanctions are advocated and the threat of sanctions is always in the air. This perverse incentive leads to manipulation of data... and gaming... No campaign to promote civil service values can compensate for that... Everything we knew about planning in socialist states but now limited to the public sector of a market economy”. This statement seems to go against the earlier advice of Locke et al. (2006) that if managers are not be punished as long as some minimum (not hard), standards are respected, there will be no problem. At least in the public service, the lack of “official sanctions” does not mean that there is no perverse incentive related to a target anyway.

A first form of gaming is referred to by Bevan et al. (2006) as “ratchet effects” where, if next year’s performance target is based on last years realised performance, there is an incentive not to exceed last year’s target, making it easier to achieve the next one.

Threshold effects refer to the tendency targets have to crowd performance towards the target (reducing performance that is above it and increasing it

<sup>13</sup> Bevan, Gwyn and Hood, Christopher (2006) “What’s measured is what matters: targets and gaming in the English public health care system”. *Public administration*, 84 (3). pp. 517-538

<sup>14</sup> OECD, (2011), “Building on basics”, paper presented to the Working Party of Senior Budget Officials downloaded from <http://www.oecd.org/gov/budgeting/49042446.pdf> on 25/5/2013.

when below). In other words it incentivises mediocrity. Ordonez et al. (2009) referred to this earlier as the “ceiling” effect.

A third effect, output distortion, is linked to the – usually unfulfilled – requirement that for targeting to work, the employed measures should capture total performance not only of the targeted domain but also of other domains. In other words, there is no measurement error of consequence. Otherwise, targets can be achieved by deteriorating significant but unmeasured aspect of performance within or outside the targeted domain, which was recognized earlier in goal setting theory by Locke et al. (2006b). It is also related to the issue noted by Ordonez et al. (2009) that when people have multiple goals, some of which are measured quantitatively and some of which qualitatively, they will tend to focus on the quantitative. In effect, qualitative measurement next to quantitative is close to only quantitative measurement.

Gaming however does not yet constitute outright cheating. Cheating refers to tampering with the actual measurement and/or reporting of it e.g. as in the case of teachers “correcting” wrong answers on exam sheets to bump up the exam performance of students so that the quality of the school appears to be high.

Wauters (2013, p. 49-52)<sup>15</sup> provides some recent striking examples of gaming and cheating relating to health care in the UK and education in the United States.

Bevan et al. (2006) notes that opportunity is increased if those who do the measuring and reporting are the same actors as those who will be judged on the basis of it. In addition, there is an incentive for supervisors who are supposed to do this judging not to look for evidence of cheating or gaming if this might call reported performance successes into question. The research reports an “audit hole”, a lack of attention to this issue.

Bevan et al. (2006) focused on the health care system in England where from 2001, the Department of Health had introduced an annual system of publishing star ratings for public health care organizations, based

<sup>15</sup> Wauters, B. (2012), *Sourcebook on results based management*. Downloaded from <http://www.coprmb.eu/?q=node/630> on 24/5/2013

on a variety of targets, but Dixon et al. (2010)<sup>16</sup> looked at the education sector. There, it was observed that in the UK, England maintained school league tables whereas Wales scrapped them as of 2001. The research shows that England did indeed increase in the percentage of pupils gaining five or more GCSEs at grades A to C – which is predominantly what the league tables are based on – relative to Wales between 2001 and 2006. As there are to be presumed few other differences between the two school systems in this period, it could be assumed that the ranking system has a beneficial effect. However, it seems this effect is limited to the actual measure used as the 3-yearly OECD PISA studies show there is no discernible difference between England and Wales on this comprehensive test. Additionally, the study questions whether it is wise for parents to base their choice of schools on the ranking of a school in a league table as this is based on GCSE scores of pupils starting school up to seven years before. Dixon et al. (2010) cite research that demonstrates the current ranking does not prove to have sufficient predictive power for future performance.

Of course, gaming and cheating are not actually measurement issues but are practices that are made possible because there are measurement issues. This paper will go deeper into the issues below.

Perrin (1998)<sup>17</sup> notes the following measurement problems:

- varying interpretations of the same terms and concepts;
- use of meaningless or irrelevant measures: Perrin (1998, p. 372) states that “There is an inverse relationship between the importance of an indicator and the ease, or even possibility, of its quantification”. This is closely related to Bevan et al. (2006) stating earlier that it is not possible to measure all aspects of performance;
- hiding critical sub-group differences by misleading aggregate numbers (e.g. a programme can achieve a 60% success rate without any of the 40% female participants achieving this success);
- not useful for decision-making as – by definition descriptive – measures do not provide any insight into the reasons why a par-

ticular measure shows what it shows. Of course, full-blown evaluations are too costly and time consuming to be carried out on a routine basis. Perrin states (1999<sup>18</sup>, p 106) “There are no simple solutions to this dilemma”.

These problems with measurement can lead to problems in behaviour. One problem that may occur is blindness to unintended consequences and rigidity in the face of a changing environment that may penalize responsive managers for addressing new needs and opportunities rather than continuing to make the numbers that may have become irrelevant. This issue was noted already by Locke et al. (2006 b) and Ordonez et al. (2009) as dysfunctional persistence of goals and strategies.

Finally, goal displacement is stated as a problem, which is similar to the output distortion mentioned earlier by Bevan et al. (2006), hence likewise a consequence of the above mentioned measurement problems rather than a measurement problem itself. Typical forms are mentioned to be creaming (focusing on clients that are easier to serve but less needy) and selectively defining the meaning of a measure to include elements not intended originally (e.g. including part time jobs in a measure of “employed” where the intent had been to focus on full time jobs but this was not specified in the measure). Another form of this is put forward as “shifting the burden” where one activities’ success can be at the expense of another (e.g. where “exits” from one programme, seen as a success, are just entries into another one).

Solutions proposed by Perrin (1998) are:

- recognizing almost any measure can be interpreted in various ways and, linked to this:
  - pre-testing measures to see how widely interpretations diverge in the field, and recognizing it usually takes many iterations of use to know if the numbers are accurate and meaningful. Then, keep reviewing and revising as they are put in use. It is best to do this with other stakeholders

<sup>16</sup> Dixon, R., Hood, C., Wilson, D. (2010), “Keeping up the Standards”, March issue, School Leadership Today, p. 2-6

<sup>17</sup> Burt Perrin, (1998), “Effective Use and Misuse of Performance Measurement”, September vol. 19 no. 3, American Journal of Evaluation, p. 367-379

<sup>18</sup> Perrin, B., (1999), “Performance Measurement: Does the Reality Match the Rhetoric? A Rejoinder to Bernstein and Winston”, March vol. 20 no. 1, American Journal of Evaluation, p. 101-111



that are key in interpreting and using the numbers to ensure ownership and relevance;

- training and orienting those who will be recording and using the information, attempting to provide as clear and unambiguous definitions to them as possible, based on the pre-testing and reviews, while still explaining the possible limitations in terms of how this should be interpreted;
- the limitations of these suggestions are recognized however. Codebooks are often too difficult for busy field staff to internalize. Involving field staff in pre-testing and reviewing in dispersed settings is not so easy while higher level management tends to hold a greater share of power in deciding what to use anyway. But this higher level may be more influenced by external pressures to report certain measures than by a desire to provide information that helps field staff improve what they do. Also field staff tend to rotate faster than training and orientation can keep up;
- using multiple indicators covering process as well as outcomes and making sure measures are used at the right level, avoiding measures that can hardly be influenced by the organization and its staff;
- not relying on numbers alone, but using a combination of methods, including soft judgment and recognizing the numbers are more useful in raising relevant questions, rather than answering them.

### Goals may motivate, but the type of motivation also matters

Another stream of research deals with the difference between intrinsic and extrinsic motivation and is referred to by Ryan (2009)<sup>19</sup> as “self-determination theory” (SDT). This article defines the phenomenon of “intrinsic motivation” as “the natural tendency manifest from birth to seek

<sup>19</sup> Ryan, R., (2009), “Self-determination Theory and Wellbeing”, WeD Research Review 1 – June.

out challenges, novelty and opportunities to learn”. Ryan et al. (2000)<sup>20</sup> refer to findings of developmental psychology that confirms that children are active, inquisitive and curious even without specific rewards.

The theory points out that these natural tendencies do require support from one’s social environment to operate robustly. This support is to be directed at three basic psychological needs, namely the need for autonomy, for relatedness and for competence. Baard et al. (2004)<sup>21</sup> define needs as innate, rather than learned and clarify that if satisfaction showed empirically to be related to a need, it actually is one, whereas if this is not the case, we should refer to it as a desire. Ryan et al. (2000) state that research showed that people whose motivation is self-authored/endorsed have more interest, excitement, confidence, which in turn is manifest as enhanced performance, persistence, creativity, vitality, self-esteem and general well-being as opposed to people whose motivation is externally controlled. This is so even when people have the same level of self-efficacy for a task.

Ryan (2009) states that SDT consists of five mini-theories. These are addressed in the following sub-sections.

### Cognitive evaluation theory: intrinsic motivation is linked to autonomy, competence and relatedness needs

The first is “cognitive evaluation theory (CET)” that stresses the importance of autonomy and competence to intrinsic motivation and that argues that events that are perceived to detract from these will diminish it. Deci et al. (1999) mention factors such as surveillance and threats as negatively related to intrinsic motivation. Providing choice, on the other hand, would increase intrinsic motivation. Ryan et al. (2000) add optimal challenges, effectance promoting feed-back (as opposed to demeaning evaluations), acknowledgment of feelings and opportunities for self-direction as facilitating intrinsic motivation as they enhance the feeling of autonomy. Directives, imposed goals etc. are tending to decrease intrinsic moti-

<sup>20</sup> Ryan, R. ., & Deci, E. L. (2000). “Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being”. *American Psychologist*, 55, 68-78

<sup>21</sup> Paul P. Baard, Edward L. Deci, Richard M. Ryan, (2004) “Intrinsic Need Satisfaction: A Motivational Basis of Performance and Well-Being in Two Work Settings”, Volume 34, Issue 10, October, *Journal of Applied Social Psychology*, p. 2045-68

vation when they conduce towards an externally perceived locus of causality. Vansteenkiste et al. (2006)<sup>22</sup> add testing and controlling langue as examples of the latter.

Deci et al. (2001)<sup>23</sup> providing a new, improved and enhanced meta-analysis based on 128 experiments, also mention evaluations as well as the general climate of a setting as more examples of external factors that can affect intrinsic motivation. This depends on whether they stress an informational aspect, conveying self-determined competence (leading to an internally perceived locus of causality), versus a controlling aspect that does the opposite.

Ryan et al. (2000) also expand on the third need, for relatedness. They state that even while people can be intrinsically motivated in isolation, this motivation tends to flourish more in context that are characterized by a sense of security and relatedness not necessarily in the sense of proximal relational support but also as a secure relational base.

### Internalising extrinsic motives: controlling versus autonomy supporting environments

A second mini-theory (Ryan, 2009), “organismic integration theory (OIT)”, addresses the process of internalization of extrinsic motives. “Internalization” is defined as the propensity of individuals to take on and attempt to integrate the social practices and values that surround them. The more autonomous a person’s motivation is, the greater their persistence, performance and well-being at an activity or within a domain.

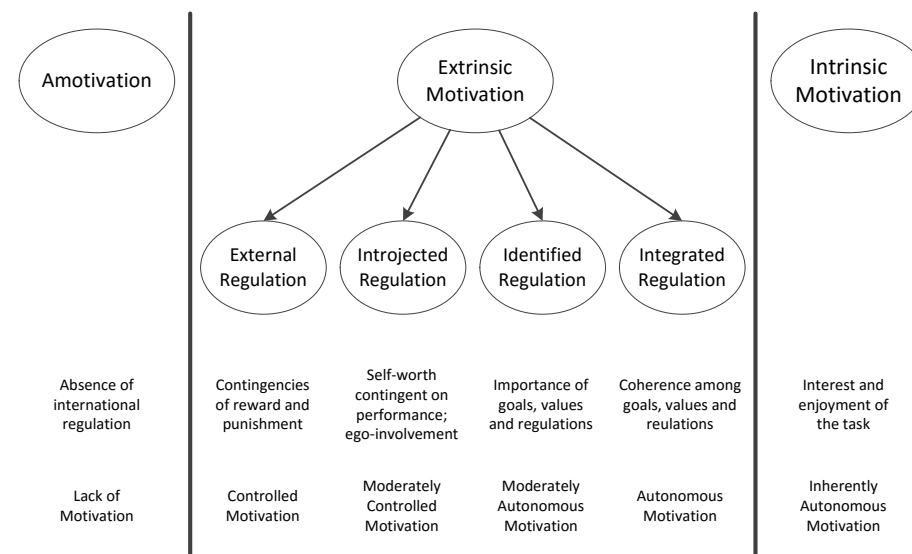
Ryan et al. (2000) provide more details on OIT. It starts from the idea that different motivations reflect different degrees to which value and regulation of the requested behavior have been internalized (taking it in) and integrated (further transforming it into their own). Intrinsic motivated actions then refer to doing an action because it is inherently satisfy-

<sup>22</sup> Vansteenkiste, Maarten; Lens, Willy; Deci, Edward L., (2006), “Intrinsic Versus Extrinsic Goal Contents in Self-Determination Theory: Another Look at the Quality of Academic Motivation”, volume 41 n1, Educational Psychologist, p19-31

<sup>23</sup> Edward L. Deci, Richard Koestner and Richard M. Ryan, (2001), “Extrinsic Rewards and Intrinsic Motivation in Education: Reconsidered Once Again”, Vol. 71, No. 1, Spring, Review of Educational Research, pp. 1-27

ing (the three basic needs), versus extrinsically motivated actions being actions we do because we want to attain some separable outcome. However, extrinsic motivation can vary greatly in its relative autonomy. Figure 1 shows a continuum of motivation relative to the degree of self-determination

Figure 1: types of motivation



Source: Gagné et al. (2005, p. 336)

Ryan et al. (2000) expand on this continuum. Amotivation is the state of lacking the intention to act, or acting without intent (going through the motions) due to not valuing, feeling incompetent or not expecting to yield a desired outcome relating to a task. External regulation means doing a task only to satisfy an external demand, typically with a feeling of being controlled or alienated. Introjected regulation refers to acts performed to avoid guilt or anxiety or to attain ego enhancements such as pride and maintaining feelings of self-worth. Although the latter is internally driven, the perceived locus of causality is external. It is noted that external and introjected regulations have in some research been taken together as a controlled motivation composite, reflecting the experience of being pressured or coerced.

Regulation through identification reflects a conscious valuing of a behavioural goal or regulation, such that the action is accepted as personally important. Integrated regulation occurs when regulations have been evaluated and brought into congruence with one's other values. This leads to a more internally perceived locus of causality. There is however still a separate outcome that is the trigger for the action, not the enjoyment of the action itself.

Vansteenkiste et al. (2006) provide three respective student related examples. Students who study primarily because they know their parents will reward them, students who study before going out as they know they would otherwise feel guilty, students who study a course they do not see as immediately satisfying (e.g. statistics) because he or she has accepted the importance of this for their self-selected and intrinsically enjoyable activity of empirical psychology.

Ryan et al. (2000) provides some suggestions how to facilitate internalisation.

First, for tasks that are not interesting, the primary reason people will do them anyway is because they are prompted, modeled or valued by others to whom the (want to) feel attached or related. This of course reflects the need for relatedness. Second, support for competence will facilitate internalization, by increasing self-efficacy. Third, the degree of autonomy conferred by the context is key (experiencing choice).

This leads to more insight into how different kinds of motivation are stimulated by their context:

- external regulation by salient rewards and threats, combined with people that feel competent enough to comply;
- introjected regulation is facilitated if a relevant reference group endorses that task and the person feels competent and related;
- identified/integrated regulation: in both cases a sense of choice, volition, freedom from excessive external pressure is required to allow people to grasp the meaning of a regulation and synthesise this meaning with respect to their other goals and values. It still driven by the desire to relate to others.

Vansteenkiste et al. (2006) provide insight, in an educational setting, of what an autonomy supportive context looks like: it is one where instructors empathize with a learner's perspective, allow opportunities for self-initiation and choice, provide a meaningful rationale if choice is restrained thus enhancing relatedness and autonomy, refrain from using pressures and contingencies to motivate and provide positive feed-back.

Externally controlling environments however made use of overtly coercive strategies, e.g. salient reward contingencies (see the next sub-section for more), deadlines, controlling language (have to, should, ought). However, guilt inducing strategies, naming and shaming, and the use of conditional regard lead to students placing themselves under a form of internal control.

Intrinsic and well internalized extrinsic motivations, facilitated by autonomy supportive contexts, are expected to promote adaptive learning better and this is supported by a variety of research.

### **In come the rewards: are they always bad?**

Deci et al. (1999b)<sup>24</sup> emphasis that rewards (even expected tangible ones) can have an informational aspect that can enhance intrinsic motivation by enhancing perceived competence. Therefore, if external events such as rewards are administered with an informational rather than a control style (where people feel pressured to think, feel, or behave in particular ways), and are hence perceived as such, the undermining effect on intrinsic motivation will be respectively less or more.

Deci et al. (2001) confirm that undermining effects vary. When a group of subjects that received no feed-back at all is compared with a group where all subjects receive maximum possible rewards, then there is a significant undermining effect. The same applies if in both groups positive feed-back is also provided. However, if both groups were rather provided with negative feedback, the rewards did not matter for intrinsic motivation. Finally, if a group that receives no feedback is compared with a group

<sup>24</sup> E. L. Deci, R. Koestner, R. M. Ryan, (1999), "The undermining effect is a reality after all - Extrinsic rewards, task interest, and self-determination: Reply to Eisenberger, Pierce, and Cameron (1999) and Lepper, Henderlong, and Gingras (1999)", Vol. 125, No. 6, Psychological Bulletin, pp. 692-700

where those who perform best get proportionally larger rewards to their performance, communicating most clearly that reward is a function of performance to this group, then the undermining effect is the largest found across all the comparisons. The undermining effect remains valid regardless of the timing of measurement (a few days versus at least a week after the reward was terminated). Actually, undermining was stronger in the long run.

However, Gagné et al. (2005)<sup>25</sup> point to research that shows that when rewards were contingent on high quality performance and the interpersonal context was supportive rather than pressuring, tangible rewards enhanced intrinsic motivation relative to a comparison condition with no rewards AND, importantly, no feedback. Also, they state the rewards must be perceived as equitable in order not to have negative effects. However, these performance-contingent rewards did lead to lower intrinsic motivation than a control group that got positive feedback comparable to that conveyed by the rewards. So positive feedback is to be preferred to performance rewards, even in autonomy supportive environments.

Deci et al. (2001) note that tangible rewards, as opposed to verbal rewards (positive feedback) will tend to be perceived as controlling. However, while positive feedback tends to have a positive effect on intrinsic motivation, the research shows verbal rewards can also have a negative effect if the interpersonal context is experienced as controlling. In addition, Gagné et al. (2005) point out research that shows that negative feedback which decreased perceived competence was found to undermine both intrinsic and extrinsic motivation, leaving people unmotivated.

Non-task contingent rewards positively affect perceived competence and hence intrinsic motivation. Deci et al. (2001) confirmed this finding and note that the unexpected nature of positive feedback probably accounts for the fact that it usually enhances intrinsic motivation. Also, Deci et al. (1999) note that if moderator variables such as salience of the reward are in play the effect of the reward may not be detrimental, notably if it is not salient.

<sup>25</sup> Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26, 331-362

Murayala (2010)<sup>26</sup> show evidence for a neural basis of the undermining effect of monetary rewards and show these effects persist by using a functional MRI scan.

Deci et al. (1999) also use the findings of their meta-analysis to substantiate OIT stating that offering rewards for an uninteresting task may help to convey that this previously perceived dull and boring activity has value, which actually facilitates internalization and counterbalances the controlling aspects that would hinder such internalization. Deci et al. (2011, p. 14) confirms this and states "it is clear that rewards do not undermine people's intrinsic motivation for dull tasks because there is little or no intrinsic motivation to be undermined. But neither do rewards enhance intrinsic motivation for such tasks." In this case, intrinsic motivation being irrelevant, it would be acceptable to go for extrinsic motivation to achieve better performance as postulated by goal setting theory earlier. However, promoting self-regulation for such tasks should perhaps better be addressed with internalization, where people's understanding of the importance of the task to themselves is facilitated.

### What does the goal itself have to say about it?

Another mini-theory, "goal contents theory" (Ryan, 2009), supports that extrinsic goals such as materialistic goals, fame or image do not tend to enhance the satisfaction of the three basic needs, and thus do not foster well-being. This is to be contrasted with goals such as intimate relations, personal growth, or contributing to one's community. Vansteenkiste et al. (2006) add health and affiliation versus physical appearance and financial success. Extrinsic goals have a 'having' orientation concerned with external manifestations of worth, while intrinsic ones have a natural growth orientation concerned with basic needs satisfaction. When people are focused on extrinsic goals they tend to score worse on a whole range of indicators (e.g. more prejudiced, less cooperative, less self-esteem, less satisfaction, more depression and anxiety, etc.). To avoid confusion, they point out that goal content is different from goal motivation in that the latter refers to 'why' people are engaging in an action.

<sup>26</sup> Murayama K, Matsumoto M, Izuma K, Matsumoto K., (2010) "Neural basis of the undermining effect of monetary reward on intrinsic motivation." *Proc Natl Acad Sci U S A.*, December, 107(49), p.20911-6.

Deci et al. (1999) refer to a meta-analysis that showed the regular use of “performance” goals (focus on demonstrating competence hence with an external manifestation of worth) rather than “mastery” goals (focus on acquiring competence, a growth orientation) leads to less free-choice task persistence (a measure for intrinsic motivation) especially when feed-back was given that explicitly confirmed successfully matching the standard.

Deci et al. (1999) also go into some detail regarding the effects of on an explicit, exceeding-others standard e.g. beat 80% of the competition. Such a system would mean the beaten 80% would get negative feedback that they are not so competent, negatively affecting the need to feel competent. Furthermore, explicit competition (even without offering rewards) has also been demonstrated to undermine intrinsic motivation of those engaging in it, in part due to a decrement in perceived autonomy caused by the competition.

Vansteenkiste et al. (2006) report on various studies that aimed to test further goal contents theory. They report relating to a reading activity that intrinsic goal framing indeed has an effect on self-reported and observed deep-level processing, test performance and free choice persistence. The results were replicated in other studies using different goals, learning materials and even relating to physical exercises rather than reading materials.

## Complexity

To conclude this article, it is interesting to note the links between the discussion about the main issues in this paper (challenging and realistic goals; gaming and cheating; intrinsic versus extrinsic motivation; verifiability versus measurement) and what is referred to as “complexity theory”.

Most organizations operate in what Snowden et al. (2007)<sup>27</sup> calls the complex domain. There are weak links between the central director

and the constituents and strong ones between the constituents (meaning there is self-organisation through self-constraint rather than central imposition). In the view of Mowles, stability is dynamically maintained by people mutually adapting to each other moment by moment, conditioned by power relations. This is possible because people are able to anticipate the anticipations of others and to create social objects, which are repeated tendencies by many people to act in particular ways.

Snowden et al. (2007) offers some tools for operating in the complex domain (to be understood as a sub-domain of the larger understanding of complexity as put forward by Mowles). He advocates the use of large group techniques to stimulate democratic, interactive, multi-directional discussions. He also advocates setting barriers – (flexible) rules to be respected – within which afterwards self-regulation occurs. In addition, probes (small experiments, stimuli) are to be launched to stimulate “attractors”. These phenomena occur when probes resonate with people. Next, dissent is to be encouraged (e.g. in a formalized way using a method called ritualized dissent) and one should focus on sustaining an environment from which good things can emerge (Google’s famous fixed % time to be devoted to personal projects can be seen as an example). Of course, Mowles (2011) asserts it is not possible to be certain good things can emerge without the possibility of bad ones.

It is fair to say the complexity-based view of management corresponds quite well with what has been asserted earlier in terms of the four main issues:

1. that to motivate both challenging and realistic goals may be required: complexity theory confirms the value of organisational vision (as an energizing process of collective promise making) but also asserts that it is by definition abstract and will be functionalized differently by people in their different settings.
2. that gaming and cheating will happen as well as other forms of unintended behaviour (e.g. supervisors exerting more control on rather than support personal growth of their subordinates). Gaming and cheating are from complexity perspective just forms of rebellion against attempts to oppress as described in

<sup>27</sup> David J. Snowden and Mary E. Boone, 2007, “A Leader’s Framework for Decision Making”, Harvard Business Review, November issue.

the previous point. In fact, as a response to power-induced constraints, they can be seen as a form of innovation.

3. that motivation may be linked to something other than financial gain: here there is recognition of the fact that manoeuvring may be for personal gain, to safeguard identity (as in entrainment) as well as to protect what people consider (perhaps more intrinsically) valuable;
4. that what may matter may be verifiability not quantitative measurement, given also that some goals may be harder to measure in the latter way: here the response of complexity theory is that targets are abstractions anyway, no matter how specific they pretend to be.

### How smart is SMART now, really?

On the basis of the discussions in this paper, it can be said that it is quite smart to use SMART if this is understood to mean:

- regarding specific tasks, in coherence with higher level more abstract goals (Specific)...
- support the use of a variety of ways to ascertain progress (Measurable)...
- at the level of individual staff (Assignable) not of the organization or a unit...
- ensuring there is enough thought put into considering the complexity of a task as well as constraints, both in terms of what people are able and allowed to do, and hence deciding on appropriately challenging learning or performance objectives linked to strategies that help achieve them (Realistic)...
- within a specific time constraint relevant to the task (Time bound).

Positive, constructive feed-back, relying on soft judgment of (potentially “dirty” but not “bad”) data collected with a variety of methods (accompanied by an understanding of their limitations), should be used by those that can make use of it, to guarantee a focus on removing obstacles – rather than on being fixated on the degree of shortfall – towards a goal.

**Regrettably, SMART usually means exactly the opposite and should perhaps be labeled STUPID:**

- high level uniform quantitative targets (Specific)...
- within a standard (mostly one year) period, regardless of the task (Timed)...
- completely divorced from any discussion regarding constraints or complexity (Unrealistic)...
- driven by external pressure (Pressurized)...
- blissfully ignorant of any strategies that could actually help realize the targets (Ignorant)...
- hence decreasing autonomous and intrinsic motivation (Demotivation) as well as ensuing well-being and performance.

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