

# **Influential Article Review - Leveraging on Behavioral Science to Boost Productivity**

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*This paper examines management. We present insights from a highly influential paper. Here are the highlights from this paper: Knowledge worker productivity is essential for competitive strength in the digital century. Small interventions based on insights from behavioural science makes it possible for knowledge workers to be more productive. In this point of view article, we outline and discuss a new management style which we label nudge management. For our overseas readers, we then present the insights from this paper in Spanish, French, Portuguese, and German.*

**Keywords:** *Knowledge worker, Productivity, Management control, Nudge theory, Motivation, Choice architecture, Behavioural science, Behavioural economics*

## **SUMMARY**

- Improving efficiency of meetings. Knowledge workers spend a substantial time in meetings. In many cases, up to 50 percent of their working hours is spent on sharing information in meeting rooms and virtual conferences. All too often the ratio of output per hour spent is perceived to be poor. One possible reason for an increase in scheduled meetings might be due to what psychologists call the information bias—the tendency to seek more and more information even though it won't affect action. Particularly in larger organizations and through the availability of «big data» such phenomenon might become even more widespread.<sup>9</sup>
- A nudge manager may approach this problem of «meeting efficiency» by looking at ways to «rebias» knowledge workers. A powerful tool here is to adjust the default assumption of meeting times. Most meetings are organised using business software where the default duration for a meeting is often set to 60 mins.
- Improving efficiency in planning. One major problem in the strategic renewal of bigger organizations is the poor execution of long term planning. Psychologists labelled this phenomenon the «planning fallacy»:<sup>10</sup> a tendency to underestimate, often due to the so-called optimism bias, the time needed to complete a future task. Psychologists currently debate the exact reasons for why this phenomenon is so widespread. We also find in large organisations not merely a tendency to underestimate the time needed to complete a task, but also an increase in the number of strategic plans . The following case is indicative of the current state of affairs: we recently assessed a large

German industrial company and found that there were more than 100 strategic initiatives in an engineering department with around 800 employees. Each initiative consisted of many activities that were defined in project charters. However, as is to be expected, the success rate of these initiatives was exceptionally low and unsurprisingly, given our knowledge of the planning fallacy, the required resources to succeed were consistently underestimated.

- A nudge manager could approach the situation by introducing so-called implementation intentions.<sup>11</sup> Studies e.g. have shown that the use of implementation intentions can result in a more likely attainment of the relevant goals, as well as to changes in behaviour with respect to future planning.
- Improving task efficiency. Unplanned interruptions are among the most effective productivity killers for knowledge workers. Working in an office environment with constant distractions makes it difficult for many knowledge workers to achieve high productivity, and practically impossible to engage in so-called deep work.<sup>12</sup> From our own experience consulting for numerous companies, knowledge workers crave longer «distraction-free» time periods, so as to be able to finalise certain tasks that require extended periods of concentrated work. Once again a nudge manager can approach this by challenging default rules or introducing new default rules. For example, one can introduce a «no-meeting» day—adopted already by numerous organizations which has led to significant improvements in productivity<sup>13</sup>. Again this can easily be implemented as a default rule in the relevant business software. No meeting days can also be combined with a work from home day which in turn encourages self-management of knowledge workers.<sup>14</sup>
- Another nudge that may help to create a less distracting environment for knowledge workers is to show employees consequences of their own past choices.
- Efficiency of knowledge sharing. Knowledge sharing is key for success in innovation for most companies. Individuals can no longer invent the «next big thing» if they are simply surrounded by others with similar assumptions and background knowledge. Innovation often requires a new mix of ideas, interaction between different research areas, and a diverse and open attitude of knowledge workers. After all, the vast majority of innovations don't simply happen sitting alone in an office. How does a nudge manager ensure that knowledge workers manage to interact fruitfully? Here let us return to our motivating case study: Google. So-called «micro kitchens» were introduced by Google to increase knowledge transfer amongst knowledge workers in an easy and pleasant way.

## HIGHLY INFLUENTIAL ARTICLE

We used the following article as a basis of our evaluation:

Ebert, P., & Freibichler, W. (2017). Nudge management: applying behavioural science to increase knowledge worker productivity. *Journal of Organization Design*, 6(1), 1–6.

This is the link to the publisher's website:

<https://jorgdesign.springeropen.com/articles/10.1186/s41469-017-0014-1>

## INTRODUCTION

Peter Drucker, one of the leading management scholars of the last 50 years, suggested that knowledge worker productivity—as opposed to blue collar worker productivity—is the biggest challenge of the 21st century.<sup>1</sup> Looking at the current situation of many private companies, hardly anyone would disagree with Drucker's prediction: the productivity of knowledge worker has become the major managerial battlefield and this even applies to companies in the manufacturing sector. Importantly, managers not merely aim to increase the cost and capital efficiency but increasingly focus on strengthening the potential for further innovation and digitalization. Together these are the major future levers of value creation for customers,

shareholders and employees. Managers and companies that succeed will stay competitive and grow profitably, others that do not will quickly cease to exist.<sup>2</sup>

A broadly similar situation was in place at the beginning of the industrial century, when Frederick Taylor applied the now well-known scientific approach to management which enabled him to increase productivity at Ford Motors to hitherto unimaginable levels.<sup>3</sup> Is a new kind of scientific management approach also the solution for competitive advantage in the the digital century?

## CONCLUSION

Nudge management offers a new exciting opportunity to improve knowledge worker productivity by focusing on and refining the organizational context that influences fast thinking to improve efficiency, effectiveness, and motivation. The advantages of nudge management, in contrast to many other change management approaches, are evident: nudges are usually not very intrusive, easily scalable, and employees are not forced to make extensive changes to their working habits. Of course, for most companies, it will be difficult to easily measure the effectiveness of nudges and new default rules. However, herein lies the great opportunity of digitalisation, big data, and an evidence-based approach to management: through continuous collection and analysis of data, companies will soon be able to assess quickly which nudges tend to work for which knowledge worker, and which ones don't—ultimately, leading to more personalised nudges and default rules individually tailored to each knowledge worker.<sup>15</sup> From this perspective, then, it is not much of a surprise that a nudge management approach is already a core aspect of one of the biggest big data company.

## REFERENCES

- Bock, L (2015) *Work Rules!: Insights from Inside Google That Will Transform How You Live and Lead.* John Murray Publishers, London.
- Brynjolfsson, E, McAfee A (2011) *Race against the machine: How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Employment and the Economy.* Digital Frontier Press, Lexington.
- Drucker, PF (1999) *Management Challenges for the 21st Century.* Butterworth-Heinemann, Oxford.
- Evans JStBT (2011) Dual-process theories of reasoning: Contemporary issues and developmental applications. *Dev Rev* 31: 86–102.
- Freibichler, W, Ebert P, Schubert T (2017) Nudge Management—Wie Führungskräfte kluges Selbstmanagement anstoßen. *Zeitschrift für Führung und Organisation* 86: 82–86.
- Gollwitzer, PM (1999) Implementation intentions: Strong effects of simple plans. *Am Psychol* 54: 493–503.
- Håkonsson, T, Carroll T (2016) Is there a dark side of Big Data – point, counterpoint. *J Organ Des* 5(5): 1–5.
- Kahneman, D (2011) *Thinking, Fast and Slow.* Farrar, Straus and Giroux, New York.
- Kahneman, D, Tversky A (1979) Intuitive prediction: biases and corrective procedures. *TIMS Stud Manag Sci* 12: 313–327.
- Kandola, B (2009) The value of difference: eliminating bias in organisations. Pearn Kandola, Oxford.
- Laloux, F (2014) *Reinventing Organizations: A Guide to Creating Organizations Inspired by the Next Stage in Human Consciousness.* Nelson Parker Press, Brussels.
- Mendoza, SA, Gollwitzer PM, Amodio DM (2010) Reducing the expression of implicit stereotypes: reflexive control through implementation intentions. *Pers Soc Psychol Bull* 36(4): 512–23.
- Newport, C (2016) *Deep Work: Rules for Focused Success in a Distracted World.* Piatkus Publishers, London.
- Schmidt, E, Rosenberg J (2015) *How Google Works.* John Murray Publishers, London.
- Sunstein, CR (2013) Deciding by Default. *University of Pennsylvania Law Review* 162(1): 1–57.
- Sunstein, CR (2014) *Nudging: A Very Short Guide.* J Consumer Pol'y 37: 583.

- Sunstein, CR (2016) *The Ethics of Influence: Government in the Age of Behavioral Science*. Cambridge University Press, New York.
- Sunstein, CR, Thaler RH (2009) *Nudge: Improving Decisions About Health, Wealth and Happiness*. Penguin Books, London.
- Taylor, FW (1911) *The Principles of Scientific Management*. Harper & Brothers, New York and London.

### **TRANSLATED VERSION: SPANISH**

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

### **VERSION TRADUCIDA: ESPAÑOL**

A continuación se muestra una traducción aproximada de las ideas presentadas anteriormente. Esto se hizo para dar una comprensión general de las ideas presentadas en el documento. Por favor, disculpe cualquier error gramatical y no responsabilite a los autores originales de estos errores.

### **INTRODUCCIÓN**

Peter Drucker, uno de los principales estudiosos de la gerencia de los últimos 50 años, sugirió que la productividad de los trabajadores del conocimiento, a diferencia de la productividad de los trabajadores de cuello azul, es el mayor desafío del siglo XXI.<sup>1</sup> Mirando la situación actual de muchas empresas privadas, casi nadie estaría en desacuerdo con la predicción de Drucker: la productividad del trabajador del conocimiento se ha convertido en el principal campo de batalla gerencial e incluso se aplica a las empresas del sector manufacturero. Es importante destacar que los gerentes no sólo tienen como objetivo aumentar el costo y la eficiencia de capital, sino que se centran cada vez más en fortalecer el potencial de mayor innovación y digitalización. Juntos son las principales palancas futuras de la creación de valor para clientes, accionistas y empleados. Los gerentes y las empresas que tengan éxito seguirán siendo competitivos y crecerán de manera rentable, otros que no dejen de existir rápidamente<sup>2</sup>.

A principios del siglo industrial, se acostó una situación ampliamente similar, cuando Frederick Taylor aplicó el ahora conocido enfoque científico de la gestión que le permitió aumentar la productividad en Ford Motors a niveles hasta ahora inimaginables.<sup>3</sup> ¿Es un nuevo tipo de enfoque de gestión científica también la solución para la ventaja competitiva en el siglo digital?

### **CONCLUSIÓN**

La gestión de Nudge ofrece una nueva oportunidad emocionante para mejorar la productividad de los trabajadores del conocimiento, centrándose y perfeccionando el contexto organizativo que influye en el pensamiento rápido para mejorar la eficiencia, la eficacia y la motivación. Las ventajas de la gestión de empujones, a diferencia de muchos otros enfoques de gestión del cambio, son evidentes: los empujones generalmente no son muy intrusivos, fácilmente escalables, y los empleados no se ven obligados a hacer cambios extensos en sus hábitos de trabajo. Por supuesto, para la mayoría de las empresas, será difícil medir fácilmente la eficacia de los empujones y las nuevas reglas por defecto. Sin embargo, aquí se encuentra la gran oportunidad de la digitalización, el big data y un enfoque basado en la evidencia para la gestión: a través de la recopilación y el análisis continuos de datos, las empresas pronto podrán evaluar rápidamente qué empujones tienden a funcionar para qué trabajador del conocimiento, y cuáles no, en última instancia, lo que conduce a presiones más personalizadas y reglas por defecto adaptadas individualmente a cada trabajador del conocimiento.<sup>15</sup> Desde esta perspectiva, desde esta perspectiva, entonces, no es una gran sorpresa que un enfoque de gestión de impulsos ya sea un aspecto central de una de las mayores empresas de big data.

## **TRANSLATED VERSION: FRENCH**

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## **VERSION TRADUITE: FRANÇAIS**

Voici une traduction approximative des idées présentées ci-dessus. Cela a été fait pour donner une compréhension générale des idées présentées dans le document. Veuillez excuser toutes les erreurs grammaticales et ne pas tenir les auteurs originaux responsables de ces erreurs.

### **INTRODUCTION**

Peter Drucker, l'un des principaux spécialistes de la gestion des 50 dernières années, a suggéré que la productivité des travailleurs du savoir — par opposition à la productivité des cols bleus — est le plus grand défi du 21e siècle.<sup>1</sup> Si l'on regarde la situation actuelle de nombreuses entreprises privées, presque personne ne serait en désaccord avec la prédition de Drucker : la productivité des travailleurs du savoir est devenue le principal champ de bataille de gestion et cela s'applique même aux entreprises du secteur manufacturier. Fait important, les gestionnaires ne visent pas seulement à accroître le coût et l'efficacité du capital, mais se concentrent de plus en plus sur le renforcement du potentiel d'innovation et de numérisation. Ensemble, ce sont les principaux leviers futurs de création de valeur pour les clients, les actionnaires et les employés. Les gestionnaires et les entreprises qui réussissent resteront concurrentiels et se développeront de façon rentable, d'autres qui ne cesseront pas rapidement d'exister<sup>2</sup>.

Une situation globalement similaire s'est déroulée au début du siècle industriel, lorsque Frederick Taylor a appliqué l'approche scientifique désormais bien connue de la gestion qui lui a permis d'augmenter la productivité chez Ford Motors à des niveaux jusqu'ici inimaginables.<sup>3</sup> Est-ce qu'une nouvelle approche de gestion scientifique est aussi la solution pour un avantage concurrentiel dans le siècle numérique?

### **CONCLUSION**

La gestion de Nudge offre une nouvelle occasion intéressante d'améliorer la productivité des travailleurs du savoir en mettant l'accent sur le contexte organisationnel qui influence la pensée rapide pour améliorer l'efficience, l'efficacité et la motivation. Les avantages de la gestion des coups de pouce, contrairement à de nombreuses autres approches de gestion du changement, sont évidents : les coups de pouce ne sont généralement pas très intrusifs, facilement évolutifs, et les employés ne sont pas obligés d'apporter des changements importants à leurs habitudes de travail. Bien sûr, pour la plupart des entreprises, il sera difficile de mesurer facilement l'efficacité des coups de pouce et des nouvelles règles par défaut. Toutefois, c'est là que réside la grande opportunité de la numérisation, du Big Data et d'une approche fondée sur des données probantes en matière de gestion : grâce à la collecte et à l'analyse continues des données, les entreprises seront bientôt en mesure d'évaluer rapidement les coups de pouce qui ont tendance à fonctionner pour lesquels les travailleurs du savoir, et lesquels ne le font pas, ce qui conduit à des nudges plus personnalisés et à des règles par défaut adaptées individuellement à chaque travailleur du savoir<sup>15</sup> , alors, il n'est pas beaucoup d'une surprise qu'une approche de gestion de coup de pouce est déjà un aspect central de l'une des plus grandes sociétés de big data.

## **TRANSLATED VERSION: GERMAN**

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## **ÜBERSETZTE VERSION: DEUTSCH**

Hier ist eine ungefähre Übersetzung der oben vorgestellten Ideen. Dies wurde getan, um ein allgemeines Verständnis der in dem Dokument vorgestellten Ideen zu vermitteln. Bitte entschuldigen Sie alle grammatischen Fehler und machen Sie die ursprünglichen Autoren nicht für diese Fehler verantwortlich.

### **EINLEITUNG**

Peter Drucker, einer der führenden Management-Wissenschaftler der letzten 50 Jahre, meinte, dass die Produktivität von Wissensarbeitern – im Gegensatz zur Produktivität von Arbeitern – die größte Herausforderung des 21. Jahrhunderts sei.<sup>1</sup> Wenn man sich die aktuelle Situation vieler privater Unternehmen anschaut, würde kaum jemand Druckers Prognose widersprechen: Die Produktivität der Wissensarbeiter ist zum wichtigsten Management-Manager auf dem Schlachtfeld geworden, und das gilt sogar für Unternehmen im verarbeitenden Gewerbe. Wichtig ist, dass Manager nicht nur die Kosten- und Kapitaleffizienz steigern, sondern sich zunehmend darauf konzentrieren, das Potenzial für weitere Innovation und Digitalisierung zu stärken. Zusammen sind dies die wichtigsten zukünftigen Hebel der Wertschöpfung für Kunden, Aktionäre und Mitarbeiter. Manager und Unternehmen, die Erfolg haben, werden wettbewerbsfähig bleiben und profitabel wachsen, andere, die nicht schnell aufhören zu existieren.<sup>2</sup>

Eine weitgehend ähnliche Situation gab es zu Beginn des Industriehunderts, als Frederick Taylor den inzwischen bekannten wissenschaftlichen Ansatz des Managements anwendete, der es ihm ermöglichte, die Produktivität bei Ford Motors auf ein bisher unvorstellbares Niveau zu steigern.<sup>3</sup> Ist ein neuer wissenschaftlicher Managementansatz auch die Lösung für Wettbewerbsvorteile im digitalen Jahrhundert?

### **SCHLUSSFOLGERUNG**

Das Nudge-Management bietet eine neue spannende Gelegenheit, die Produktivität von Wissensarbeitern zu verbessern, indem es sich auf den organisatorischen Kontext konzentriert und verfeinert, der schnelles Denken beeinflusst, um Effizienz, Effektivität und Motivation zu verbessern. Die Vorteile des Nudge Managements liegen im Gegensatz zu vielen anderen Change-Management-Ansätzen auf der Hand: Nudges sind in der Regel nicht sehr aufdringlich, leicht skalierbar, und die Mitarbeiter sind nicht gezwungen, ihre Arbeitsgewohnheiten umfassend zu ändern. Natürlich wird es für die meisten Unternehmen schwierig sein, die Wirksamkeit von Nudges und neuen Standardregeln einfach zu messen. Hierin liegen jedoch die große Chance der Digitalisierung, Big Data und eines evidenzbasierten Managementansatzes: Durch die kontinuierliche Erfassung und Analyse von Daten werden Unternehmen bald schnell beurteilen können, welche Nudges dazu neigen, für welchen Wissensarbeiter zu arbeiten, und welche nicht – was letztlich zu personalisierteren Nudges und Standardregeln führt, die individuell auf jeden Wissensarbeiter zugeschnitten sind.<sup>15</sup> Aus dieser Perspektive.<sup>15</sup> Aus dieser Perspektive, daher ist es nicht verwunderlich, dass ein Nudge-Management-Ansatz bereits ein Kernaspekt eines der größten Big-Data-Unternehmen ist.

## **TRANSLATED VERSION: PORTUGUESE**

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## **VERSÃO TRADUZIDA: PORTUGUÊS**

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### **INTRODUÇÃO**

Peter Drucker, um dos principais académicos de gestão dos últimos 50 anos, sugeriu que a produtividade dos trabalhadores do conhecimento — ao contrário da produtividade dos trabalhadores do colarinho azul — é o maior desafio do século XXI.<sup>1</sup> Olhando para a situação atual de muitas empresas privadas, quase ninguém discordaria da previsão de Drucker: a produtividade do trabalhador do conhecimento tornou-se o grande campo de batalha de gestão e isso aplica-se mesmo às empresas do setor manufatureiro. É importante que os gestores não se limitem a aumentar o custo e a eficiência de capital, mas a concentrarem-se cada vez mais no reforço do potencial de inovação e digitalização. Juntas, estas são as principais alavancas futuras de criação de valor para clientes, acionistas e colaboradores. Os gestores e as empresas que forem bem sucedidos manter-se-ão competitivos e crescerão lucrativamente, outros que não deixarão rapidamente de existir.<sup>2</sup>

Uma situação amplamente semelhante ocorreu no início do século industrial, quando Frederick Taylor aplicou a já conhecida abordagem científica da gestão que lhe permitiu aumentar a produtividade na Ford Motors a níveis até agora inimagináveis.<sup>3</sup> Um novo tipo de abordagem de gestão científica também é a solução para a vantagem competitiva no século digital?

### **CONCLUSÃO**

A gestão de nudges oferece uma nova e excitante oportunidade para melhorar a produtividade dos trabalhadores do conhecimento, focando-se e refinando o contexto organizacional que influenciam o pensamento rápido para melhorar a eficiência, eficácia e motivação. As vantagens da gestão de nudges, ao contrário de muitas outras abordagens de gestão de mudanças, são evidentes: os empurrões não são geralmente muito intrusivos, facilmente escaláveis, e os trabalhadores não são obrigados a fazer alterações extensivas aos seus hábitos de trabalho. Naturalmente, para a maioria das empresas, será difícil medir facilmente a eficácia dos empurrões e das novas regras de incumprimento. No entanto, aqui reside a grande oportunidade de digitalização, big data, e uma abordagem baseada em evidências para a gestão: através da recolha e análise contínua de dados, as empresas em breve poderão avaliar rapidamente quais os nudges que tendem a trabalhar para os quais o trabalhador do conhecimento, e quais os que não o fazem — em última análise, levando a empurrões e regras de incumprimento mais personalizadas individualmente adaptadas a cada trabalhador do conhecimento.<sup>15</sup> Nesta perspetiva, desta perspetiva, as empresas poderão avaliar rapidamente quais os nudges que tendem a trabalhar para os quais os trabalhadores do conhecimento, e quais não o fazem — em última análise, levando a empurrões mais personalizadas e regras de incumprimento individualmente adaptadas a cada trabalhador do conhecimento.<sup>15</sup> Nesta perspetiva, destas perspetivas, as empresas poderão avaliar rapidamente quais os nudges que tendem a trabalhar para os quais os trabalhadores do conhecimento, e quais os que não o fazem — em última análise, levando a empurrões e regras de incumprimento mais personalizadas individualmente a cada trabalhador do conhecimento.<sup>15</sup> Nesta perspetiva, as empresas poderão avaliar rapidamente quais os nudges que tendem a trabalhar para os quais o trabalhador do conhecimento, e , então, não é uma grande surpresa que uma abordagem de gestão de nudges já seja um aspeto central de uma das maiores empresas de big data.