The Reflective Executive

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In October 2013, more than 40 executives attended an IMD Discovery Event that explored why theory matters. The participants – senior managers from a variety of companies and industries – reflected about the link between theory and practice and applied theoretical tools and principles to their personal business challenges.

Discovery Events are exclusively available to members of IMD's Corporate Learning Network. To find out more, go to www.imd.org/cln

Theory has a bad reputation – especially in business. Harold S. Geneen famously said, "You cannot run a business, or anything else, on a theory." Yet theory plays an essential role in managerial decision making.

Managers need to be able to make sense of rapidly changing and often confusing business environments, and their actions and decisions are based on theories, assumptions or intuitions. Yet many of our theories and intuitions are wrong, illogical or disproven. Learning to think theoretically and systematically can help managers sharpen their analytical skills, focus on what is truly important, encourage curiosity and creativity, and spark innovation in their organizations.

What exactly is theory? How are theories created, challenged and tested? How are theoretical tools and principles applied to solve business challenges? These are some of the questions addressed in this *insights*@IMD.

What is theory?

Theory is an explanatory framework based on observation, experimentation and reasoning. Theories are developed by comparing ideas of reality with reality itself. According to Clayton Christensen, "a theory is a statement predicting which actions will lead to what results and why."

Theory building is a part of the scientific method that forms the foundation of both physical sciences (e.g. physics) and the social sciences (e.g. management). While the steps and processes involved can vary depending on the type of research, some common tools and principles form the basis for furthering knowledge and making information practical.
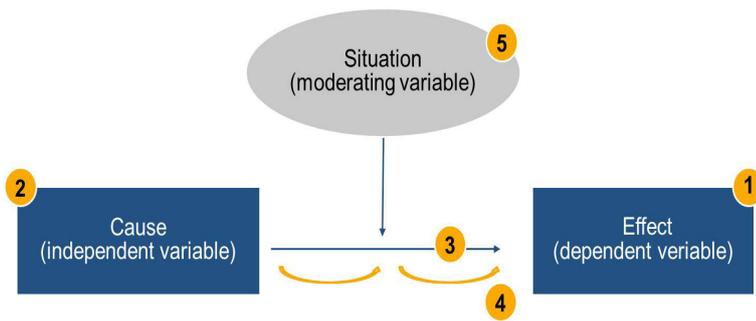
The building blocks of theory

Theories are built using three basic building blocks: elements, process and criteria.

The elements

The first building block of any theory consists of five interlinked elements (see Figure 1):

1. The effect (or dependent variable) is the result that you want to achieve (e.g. increasing sales of your product);
2. The cause (or independent variable) is thought to bring about the effect (e.g. improving awareness and visibility of your product);
3. The type of relationship describes the relationship between the independent and dependent variables (e.g. will sales increase proportionately with the visibility of the product?);
4. The causal mechanism is the story that connects the independent and dependent variable, i.e. the reasons why this might be the case (e.g. people will only buy the product if they know about its existence through a targeted marketing campaign).
5. The situation (or moderating variable) influences the relationship between the independent and dependent variables (e.g. sales of your product will only increase if the product is targeted to a certain demographic).

Figure 1: Elements of theories

1. Describe phenomena that you see happening in the world;

2. Create categories to define and group these phenomena;

3. Model reality by trying to provide a simple explanation for what is happening.

Theories can be built either inductively or deductively. On the one hand, inductive theory is comprised of predictions that are based on observations of phenomena. Deductive theory, on the other hand, is based on combining existing knowledge from one or more premises to create new knowledge. Generally speaking, an inductive approach is more open-ended and exploratory and a deductive approach is used to test or confirm hypotheses. Most theory building, however, can involve both inductive and deductive approaches throughout the process.

Building a theory involves looking for anomalies – things that deviate from what is standard, normal or expected. It is a method for examining these anomalies (or questions) in view of learning something new. Anomalies happen frequently and can lead to paradigm shifts. A good example is IKEA (see text box).

This is also true in management theory: under stable situations accepted best practices hold, but under disruptive circumstances things are likely to change (see Figure 3). Successful entrepreneurs – and successful managers – are skilled at detecting anomalies and creating and testing new theories and business models.

In short, a good theory must relate an effect with a cause using verifiable logic and taking into account various influencing factors. The scientific method involves thinking about how these theoretical elements interact and how they can be measured. The five elements provide a structure to help understand cause–effect relationships, which can help managers analyze their own positions and any managerial theories that are presented to them. The more aware managers are of the logic and elements that underlie theories, the more equipped they are to challenge their own thinking and that of others.
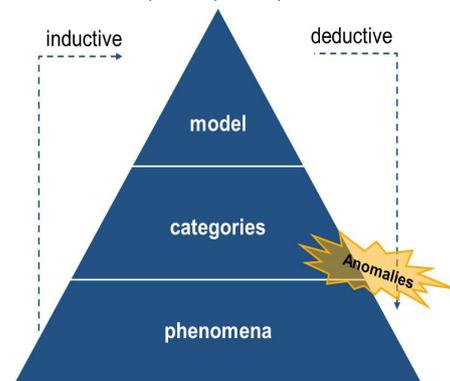
The process
Developing a theory is a process that helps you define and configure the elements. The process of theory development can be broken down into three stages (see Figure 2[1]):

[1] Adapted from C.M. Christensen and P.R. Carlile. "Course research: Using the case method to build and teach management theory." *Academy of Management Learning and Education*, Vol. 8, No. 2, 2009: 240-251.

Figure 2: The process of theory development

The criteria
After using a theory building process to define and configure the elements, the final building block of theory focuses on testing criteria. Theories should be tested in ways that are objective, reliable (repeatable or reproducible) and empirically valid. Backing up a theory with a test and experiments makes it easier to communicate and gives it legitimacy, which means others are more likely to buy into it.

A theory for reinventing furniture retail

IKEA founder Ingvar Kamprad grew his business by taking advantage of a series of potentially difficult situations and addressing unmet needs in the market. He initially owned a catalogue retail business but later opened a showroom to demonstrate the function and quality of its low-price products and to put an end to a price war with one of its main competitors. The decision for IKEA to design its own furniture for flat packs and self-assembly stems, ironically, from competitors' pressure for suppliers to boycott IKEA. Exploration of flat packaging began when one of the first IKEA co-workers removed the legs of the LÖVET table so that it would fit into a car and avoid damage during transit. After this discovery, flat packs and self-assembly became part of the concept. Kamprad went on to become famous for proving his theory that customers want products with the best value for money. (*Adapted from http://www.ikea.com/ms/en_GB/about_ikea/the_ikea_way/history/1940_1950.html*)

Theories can be evaluated and tested in terms of their contribution to improving knowledge and their validity.

Contribution. A theory should allow us to predict a relevant phenomenon better than we could before; it should go against accepted wisdom and provide an interesting, counterintuitive insight; and it should provide insights on what is needed to do something on a bigger scale.

Validity. Internal validity focuses on how the theory is formulated and derived logically and empirically, which is important because many management theories are formulated in a way that is not falsifiable. External validity focuses on generalizability to other populations and communities.

Theories can be challenged by being aware of the difference between correlation and causality. We are hard-wired to believe in causality (where one event is the direct consequence of another) even where there is, in fact, correlation (where two events appear to have a relationship but are in fact coincidental), because we are programmed to find patterns. It is essential to be able to justify why or how a cause and effect are linked. Famous examples of correlation without causation include an increase in the number of storks in Europe being associated with a higher birthrate, and a rise in the number of Nobel Prize winners being associated with a surge in chocolate consumption in some countries.

Realizing situations in which a theory does not accurately predict an outcome is not a failure, but an opportunity for progress. Testing can take a lot of time and although

theories should be tested to some extent, there comes a point when testing has to stop and a decision has to be made. But it is only through continuous testing that theories can be refined to more accurately reflect reality.

Creating, challenging and testing theories

1. To begin creating a theory, formulate it as either "if A then B" or "the more/less A, the more/less B." This can be done by visualizing it with bubbles and arrows, as in Figure 1. For each theory, answer the following questions:
   i. What are you trying to explain (dependent variable)?
   ii. What is the cause (independent variable)?
   iii. What is the story that explains why A affects B?
   iv. Are there any important variables that moderate the relationship suggested in your theory?

2. Next, think of any anomalies to your theories (situations that contradict one or

Figure 3: Management principles and their problems in disruptive circumstances

more of your theories) and whether you can readjust your theory to account for the anomaly so that the theory holds true even in light of the anomaly.

3. Finally, develop a design to test your theory:

i. How would you study it (e.g. survey, ethnographic observation, study using secondary data, non-reactive study)?

ii. How would you measure your variables objectively, reliably and validly?

iii. For which alternative explanations would you control, and how?

Using theory to improve management skills

There are inherent difficulties in applying theory to practice but the three building blocks – elements, process and criteria – can help with sensemaking (making sense of the complex world in which managers operate), leadership (directing attention to what is important to the organization), and shaping the future (encouraging curiosity and a creative process that can lead to innovation).

Managers can also use the basic concepts of theory in the following ways:

Challenging intuitions. Always revisit underlying (implicit) assumptions and theories. Being able to efficiently test intuitions and assumptions gives greater insights into the business realities, and provides ammunition to challenge other people's theories and thus avoid being blindsided.

Developing a creative culture. While theory concepts and tools will not lead to exact performance predictions, they can provide a language and a framework for discussing new ideas and thus spur creativity and innovation. So it can be useful to develop a culture of knowing how and when to challenge ideas by encouraging others to view the world in a purposeful way.

Making better decisions. Do you rely on academic models, market data, intuition, or a combination of the above? Managers can take tools from the scientific method to decide what theories they want to – or do not want to – support. Pilot projects are one example of testing a theory using data to obtain insights that help make decisions about whether or not to ramp up small-scale initiatives.

Managers use a combination of theories or concepts that vary depending on the context. Relying on a singular theory or concept does not necessarily lead to success in the rapidly changing business environment. The reflective executive takes a step back from complex situations and realizes when it is appropriate to apply different approaches to different situations. Using the tools and principles of theory, managers can solve complex business challenges and create positive outcomes for themselves and their organizations.

Building theories – A manager's checklist

Elements

What are your underlying assumptions?

Do you have a dependent variable – what do you want to change?

Do you have an independent variable – what could be the cause?

What is the connection between the dependent and independent variables?

Are you making a claim with falsifiable statements?

Do you have a story that explains why?

Are there any circumstantial variables that could limit the validity and transferability?

Process

What patterns do you observe?

Are there any anomalies within or outside your organization?

Is your team sensitive to what is going on in their world?

Is there a culture of curiosity in your organization where someone says S.T.O.P. (Stop, Think, Observe and Plan)?

Are you careful in inducing and testing?

Criteria

Is what you're talking about relevant and making a true contribution?

Are you correctly operationalizing what you want to do?

Did you test

- Correlation vs. causality?

- Controls for alternative explanations?

- Direction and sign of causality?

- Type and strength of effect?