

Valuing Peace and Quiet: the Effect of Expansion Mode on Learning toward Subordinate Goals

Julian Barg

Ivey Business School

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Outline

Context

Learning

Hypothesis development

Methods

Results

Conclusion



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Outline

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- Context
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https://github.com/julianbarg/oil_industry/

https://github.com/julianbarg/oil_industry/

Includes data collection, variable transformation, stata code for results, and even this presentation, and the dashboards.



Summary

Findings

- ▶ Organization-wide strategic changes will disrupt learning that has occurred in suborganizations.
- ▶ Thus, when "nothing happens", something does happen: organizational learning.
- ▶ From a learning perspective, it is better to take a long-term perspective on strategic adjustments.
 - ▶ Implementing change in a less disruptive fashion.
- ▶ Depending on the context, implications for organizational performance (environmental and economic).



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Summary

This is what expansion mode refers to in the title, not greenfield or M&A (although there are M&As in the dataset).

"Learning perspective" matters, because from a technology perspective, the conclusion might be different. In a temporality-inspired learning research fashion. Depending on the type of organization - where mistakes threaten survival, very relevant.

Findings

- ▶ Organization-wide strategic changes will disrupt learning that has occurred in suborganizations.
- ▶ Thus, when "nothing happens", something does happen: organizational learning.
- ▶ From a learning perspective, it is better to take a long-term perspective on strategic adjustments.
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https://julianbarg.shinyapps.io/pipelines_dashboard/



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└ Context

└ Context

https://julianbarg.shinyapps.io/pipelines_dashboard/

"This is a tool I use for my research." Just briefly show the nature of the data.

- We have comprehensive data on pipelines in the US.
- We know which organizations have how many miles. (show top 5)
- We know how old their pipelines are.
- We know how many incidents occur.
- So it would be a great context to study strategy, and how it affects incident rates.

https://julianbarg.shinyapps.io/incident_dashboard/



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Valuing Peace and Quiet: the Effect of Expansion
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└ Context

└ Cases

"This is a tool I use for my research." Just briefly show the scale, because i found it hard to imagine, just from numbers.

- Show all organizations at once, add some jitter, alpha.
- Show one group, remove jitter, alpha.

Cases

https://julianbarg.shinyapps.io/incident_dashboard/

High-profile bankruptcies related to pipeline incidents

- ▶ Greka Energy/HVI Cat Canyon (1996, 2005, 2019)
- ▶ Pacific Gas and Electric Company (2001, 2019)
- ▶ EdgeMark (2019)

→ There is some relevance for traditional performance also.



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└ Context

└ Context

Greka: History of oil spills, settlements relatively unexpensive, e.g., \$12 million fine caused bankruptcy in 2019, ironically, CEO once stated company motto as "Working for profits".

PG&E: After 2010 explosion with 8 deaths, paid \$300m in fines, \$400m in refunds, \$850m for upgrades, and \$500m in settlements.

EdgeMark: Energy Transfer pipeline explosion led to EdgeMark Bankruptcy. Ontario Teachers' Pension fund held minority stake.

I don't explore this relevance for performance any further though.

Research Question

How does organizational learning and forgetting play out in the context of strategic adjustment and hierarchies?



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Valuing Peace and Quiet: the Effect of Expansion
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└ Context

└ Research Question

Let me show you the phenomenon I have been working on, what I believe is going on, and how that generalizes.

Research Question

How does organizational learning and forgetting play out in the context of strategic adjustment and hierarchies?

Organizational forgetting: Definitions

- ▶ *Organizational learning*: "change in the organization's knowledge that occurs as a function of experience" (Argote, 2013b, p. 31).
- ▶ *Organizational forgetting*: "the loss, voluntary or otherwise, of organizational knowledge [which] often leads to a change in organizational capabilities because of the absence of some piece of knowledge" (De Holan and Phillips, 2004, p. 1606).
- ▶ *Disruptions*: "organizational change-inducing events" (Anderson and Lewis, 2014, p. 362)



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└ Learning

└ Organizational forgetting: Definitions

Both forgetting and disruptions are thought to be sometimes positive, too, but I will not cover that here.

Disruption also sometimes described as merely "interacting" with forgetting (Anderson & Lewis 2014).

Will have examples of disruptions in the next couple of slides.

- ▶ *Organizational learning*: "change in the organization's knowledge that occurs as a function of experience" (Argote, 2013b, p. 31).
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Learning

Learning curve

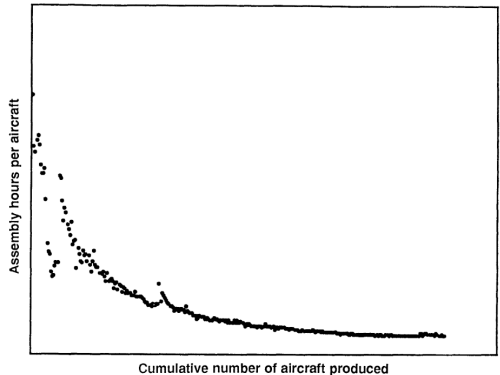


Figure 1: Relation between assembly hours per aircraft and cumulative number produced. Units omitted. From: Argote et al. (1990, p. 921)



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- Learning
- Learning

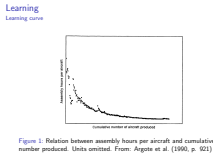


Figure 1: Relation between assembly hours per aircraft and cumulative number produced. Units omitted. From: Argote et al. (1990, p. 921)

You have probably seen this before. Read out caption. So in our context, we could imagine an organization operating its pipeline and equipment, getting better at it, making less mistakes, having less incidents. The organization in charge of pipeline safety is a suborganization.

Learning

Disrupted learning

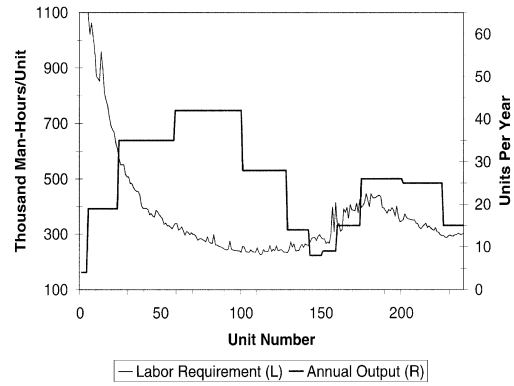


Figure 2: L-1011 Production: Direct Labor Requirement and Yearly Output. From: Benkard (2000, p. 1039)



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Learning

Learning

Learning
Disrupted learning

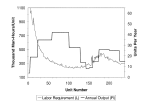


Figure 2: L-1011 Production: Direct Labor Requirement and Yearly Output. From: Benkard (2000, p. 1039)

We see more than in the last picture. This is the production of the Lockheed L-1011. Famous for being an amazing plane, but a commercial failure. What happened here, around 150 units? Economic downturn, production was disrupted. Then, company decided the only way to break even is to produce a certain number of planes, but that did not happen.

Learning

Disrupted learning

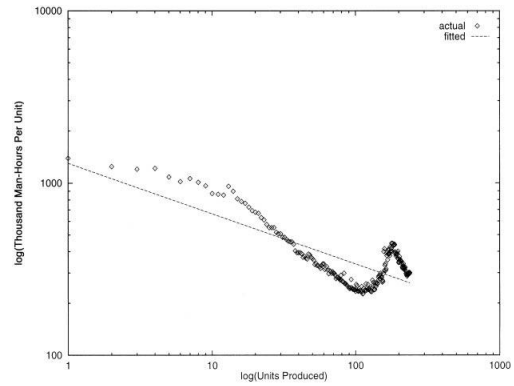


Figure 3: Traditional Learning Curve: All 238 (log-log). From: Benkard (2000, p. 1046)



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└ Learning

└ Learning

Learning
Disrupted learning

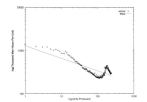


Figure 3: Traditional Learning Curve: All 238 (log-log). From: Benkard (2000, p. 1046)

This is what actually happened. After Lockheed increased production again, the number of man-hours per plane actually increased for a while, before it decreased again. In our context, we could imagine a pipeline operator operating a pipeline for many years, then shutting it off for a while, before resuming operations. Knowledge would be lost, especially if the shut-off went hand in hand with lay-offs, and if the company had to hire new staff later.

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└ Learning

Organizational forgetting
Also known as knowledge depreciation

Organizational forgetting

Also known as knowledge depreciation

The Lockheed is a pretty famous example for this.



Organizational forgetting

- ▶ Turnover (De Holan and Phillips, 2004; Rao and Argote, 2006)
- ▶ Loss of recorded knowledge
- ▶ Technology becoming irrelevant
- ▶ Decay of social networks (Argote, 2013a; Argote et al., 1990; Thompson, 2007)
- ▶ Disruption
 - ▶ Internal
 - ▶ Disruption of regular production
 - ▶ Technology (Amburgey et al., 1993; Edmondson et al., 2001)
 - ▶ Restructuring/reorganization/layoffs (or even hirings) (Benkart, 2000; Anderson and Lewis, 2014)
 - ▶ External
 - ▶ Economic cycles (Rockart and Wilson, 2019)
 - ▶ Natural disasters (Anderson and Lewis, 2014)



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- └ Learning

- └ Organizational forgetting

Relate sources of forgetting to our context.

When a large number and/or key employees leave a company, and knowledge and/or networks are lost as a result. Which is also acknowledged in the wider learning literature.

Organizational disruption is special case of organizational forgetting. Disruption can stem from inside, or outside of the organization.

Organizational forgetting

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Valuing Peace and Quiet: the Effect of Expansion
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└ Hypothesis development

So what do I think is happening in our context?

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Hypothesis development

- Organizations operate pipelines, part of the organization is in charge of safety.



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Valuing Peace and Quiet: the Effect of Expansion
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└ Hypothesis development

└ Hypothesis development

Organization can be in the business of pipelines, or extraction. Usually a dedicated department in charge of pipeline safety. For other parts of the organization. So that is what we are going to do. We track the scope of the organization, the expansion mode (sporadic or even across time), and the impact on pipeline safety.

Hypothesis development

- Organizations operate pipelines, part of the organization is in charge of safety.

Hypothesis development

- ▶ Organizations operate pipelines, part of the organization is in charge of safety.
- ▶ HQ makes strategic decisions that impact the whole organizations.



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- └ Hypothesis development

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Hypothesis development

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- ▶ In many scenarios, the strategic decision can be a source of disruption.



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- ▶ In the context of pipelines, we can track decision making very well, because we know the scope of the organization/suborganization company very well.



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- └ Hypothesis development

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Hypothesis development

Hypothesis 1

Strategic adjustments from the parent organization disrupt the learning of suborganizations.



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└ Hypothesis development
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Hypothesis development
Hypothesis 1
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Hypothesis development

Hypothesis 1

Strategic adjustments from the parent organization disrupt the learning of suborganizations.

Hypothesis 2

Phases of stability, with less strategic adjustments being initiated by the parent organization, allow for the suborganizations to learn.



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└ Hypothesis development

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Hypothesis development

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Phases of stability, with less strategic adjustments being initiated by the parent organization, allow for the suborganizations to learn.

Hypothesis 1c (Competing)

Strategic adjustments act as external shocks to suborganizations, and induce additional learning.



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└ Hypothesis development

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Before I forget...

- ▶ Fixed-effect
- ▶ Company-year



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└─ Methods
└─ Before I forget...

- ▶ Fixed-effect
- ▶ Company-year

Independent variable

Change of the organization over time - pipeline assets.

→ **Low** if the organization is not changing, or changing at constant pace.

→ **High** if organization deviates from previous course.

$$A_t = ((C_t - \bar{C})^2 + (C_{t-1} - \bar{C})^2 + (C_{t-2} - \bar{C})^2)/2$$

where

$$C = M_t - M_{t-1}$$

M is **M**iles of pipeline

A is strategic **A**adjustments



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└ Methods

└ Independent variable

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M is **M**iles of pipeline

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Dependent variable

Incidents - three year average

$$\bar{I} = (I_t + I_{t+1} + I_{t+2})/3$$

where

I is number of significant incidents



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└─Methods

└─Dependent variable

Dependent variable

Incidents - three year average

$$\bar{I} = (I_t + I_{t+1} + I_{t+2})/3$$

where

I is number of significant incidents

Dependent variable

Fulfill any of these four criteria:

- ▶ " Fatality or injury requiring in-patient hospitalization
- ▶ \$50,000 or more in total costs, measured in 1984 dollars
- ▶ Highly volatile liquid releases of 5 barrels or more or other liquid releases of 50 barrels or more
- ▶ Liquid releases resulting in an unintentional fire or explosion

[https://www.phmsa.dot.gov/data-and-statistics/
pipeline/pipeline-incident-20-year-trends](https://www.phmsa.dot.gov/data-and-statistics/pipeline/pipeline-incident-20-year-trends)



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└ Methods

└ Dependent variable

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Data source

Pipeline and incident data extracted from two different datasets from FERC (Federal Energy Regulatory Commission).

- ▶ Same dataset (incidents): Park and Rogan (2019)

M&A, ownership data obtained from LexisNexis.



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└─ Methods

└─ Data source

FERC frequently used in econometrics/economics papers, e.g., BEPP.

Data source

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Control variables

- ▶ M&As: Learning spillover that is separate from the disruption caused.
- ▶ (4 out of 6 models) Year effect.
- ▶ (2 out of 6 models) Consolidation and extension as two separate variables, measured more precisely than IV.
- ▶ Controlling for age and extent of pipeline network.



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└ Methods

└ Control variables

Controlling for consolidation and extension to ensure that we are really capturing the effect of strategic adjustment, rather than effect of the specific direction. Average age, or miles by decade constructed.

Control variables

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Results - numeric

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Adjustments	1.5 (1.21)	1.93* (1.15)	1.41 (1.19)	1.22* (0.65)	1.29* (0.77)	1.24* (0.66)
Adjustments sq.	-0.46 (0.33)	-0.54* (0.31)	-0.42 (0.32)	-0.22 (0.14)	-0.26 (0.17)	-0.21 (0.14)
Miles add	0.17 (0.59)		0.1 (0.59)	-0.57* (0.33)		-0.48 (0.32)
Consolidation	0.07 (0.1)		0.08 (0.1)	0.1*** (0.03)		0.09*** (0.03)
M and A	1.53 (1.92)	3.75** (1.64)	1.75 (2.02)	2.22 (1.45)	2.31*** (0.79)	2.47 (1.5)
M and A t-1	-1.58 (1.14)	-1.21 (0.83)	-1.36 (1.16)	-0.89*** (0.28)	1.15 (0.77)	-0.96** (0.44)
...
Constant	2.12 (2.42)	-1.83 (2.42)	1.89 (2.39)	-4.21*** (1.11)	-2.88** (1.23)	-4.21*** (1.08)
Groups	69	70	69	69	78	69
Observations	401	474	401	401	624	401
R-sq within	0.33	0.32	0.33	0.75	0.62	0.76
R-sq between	0.3	0.43	0.3	0.2	0.3	0.19
R-sq overall	0.34	0.42	0.33	0.21	0.3	0.2



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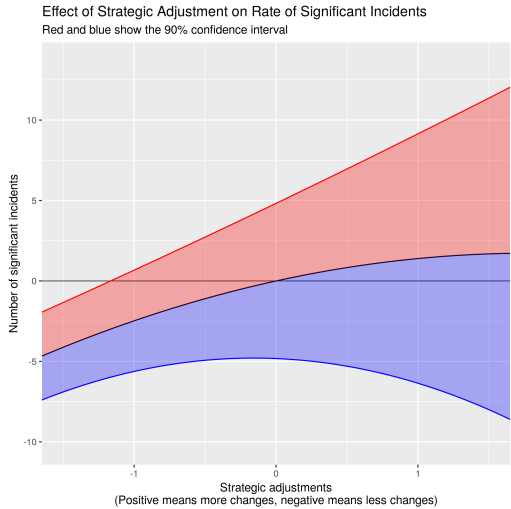
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Results - graphed



- ▶ Hypothesis 1:
Strategic adj. disrupt learning. ✗
- ▶ Hypothesis 2:
Stability allows suborg. to learn. ✓
- ▶ Hypothesis 1c:
Strategic adj. is positive external shock. ✗

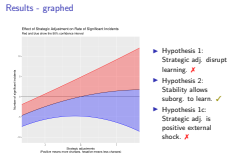


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Results - graphed



Summary

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└ Conclusion

Summary

This is what expansion mode refers to in the title, not greenfield or M&A (although there are M&As in the dataset).

"Learning perspective" matters, because from a technology perspective, the conclusion might be different. In a temporality-inspired learning research fashion. Depending on the type of organization - where mistakes threaten survival, very relevant.

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Summary

Limitations

- ▶ Not controlling for revenue, profitability, number of employees yet.
- ▶ Results driven by a number of outliers.
- ▶ Further disentangle effect of technology vs. strategy.



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└ Conclusion

└ Summary

Could merge in business unit level data from compustat. Already remove most extreme outliers, but have not analyzed this issue further - robustness check? Empirical analysis of the two - which dominates?

Summary

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- ▶ Further disentangle effect of technology vs. strategy.

Bibliography I

Amburgey, T. L., D. Kelly, and W. P. Barnett (1993). Resetting the Clock: The Dynamics of Organizational Change and Failure. *Administrative Science Quarterly* 38(1), 51.

Anderson, E. G. and K. Lewis (2014, apr). A Dynamic Model of Individual and Collective Learning Amid Disruption. *Organization Science* 25(2), 356–376.

Argote, L. (2013a). Organizational Forgetting. In *Organizational Learning* (2nd ed.), Chapter 3, pp. 57–84. Boston, MA: Springer US.

Argote, L. (2013b). *Organizational Learning* (2nd ed.). Boston, MA: Springer US.

Argote, L., S. L. Beckman, and D. Eppe (1990). The Persistence and Transfer of Learning in Industrial Settings. *Management Science* 36, 140–154.



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└ Bibliography

Bibliography I

Amburgey, T. L., D. Kelly, and W. P. Barnett (1993). Resetting the Clock: The Dynamics of Organizational Change and Failure. *Administrative Science Quarterly* 38(1), 51.

Anderson, E. G. and K. Lewis (2014, apr). A Dynamic Model of Individual and Collective Learning Amid Disruption. *Organization Science* 25(2), 356–376.

Argote, L. (2013a). Organizational Forgetting. In *Organizational Learning* (2nd ed.), Chapter 3, pp. 57–84. Boston, MA: Springer US.

Argote, L. (2013b). *Organizational Learning* (2nd ed.). Boston, MA: Springer US.

Argote, L., S. L. Beckman, and D. Eppe (1990). The Persistence and Transfer of Learning in Industrial Settings. *Management Science* 36, 140–154.

Bibliography II

Benkard, C. L. (2000). Learning and forgetting: The dynamics of aircraft production. *American Economic Review* 90(4), 1034–1054.

De Holan, P. M. and N. Phillips (2004). Remembrance of things past? The dynamics of organizational forgetting. *Management Science* 50(11), 1603–1613.

Edmondson, A. C., R. M. Bohmer, and G. P. Pisano (2001). Disrupted Routines: Team Learning and New Technology Implementation in Hospitals. *Administrative Science Quarterly* 46(4), 685.

Park, B. and M. Rogan (2019). Capability Reputation, Character Reputation, and Exchange Partners' Reactions to Adverse Events. *Academy of Management Journal* 62(2), 553–578.

Rao, R. D. and L. Argote (2006, jun). Organizational Learning and Forgetting: The Effects of Turnover and Structure. *European Management Review* 3(2), 77–85.



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Valuing Peace and Quiet: the Effect of Expansion
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└ Bibliography

Bibliography II

Benkard, C. L. (2000). Learning and forgetting: The dynamics of aircraft production. *American Economic Review* 90(4), 1034–1054.
De Holan, P. M. and N. Phillips (2004). Remembrance of things past? The dynamics of organizational forgetting. *Management Science* 50(11), 1603–1613.
Edmondson, A. C., R. M. Bohmer, and G. P. Pisano (2001). Disrupted Routines: Team Learning and New Technology Implementation in Hospitals. *Administrative Science Quarterly* 46(4), 685.
Park, B. and M. Rogan (2019). Capability Reputation, Character Reputation, and Exchange Partners' Reactions to Adverse Events. *Academy of Management Journal* 62(2), 553–578.
Rao, R. D. and L. Argote (2006, jun). Organizational Learning and Forgetting: The Effects of Turnover and Structure. *European Management Review* 3(2), 77–85.

Rockart, S. F. and K. Wilson (2019, jan). Learning in Cycles.
Organization Science 30(1), 70–87.

Thompson, P. (2007, jun). How Much Did the Liberty Shipbuilders
Forget? *Management Science* 53(6), 908–918.

