

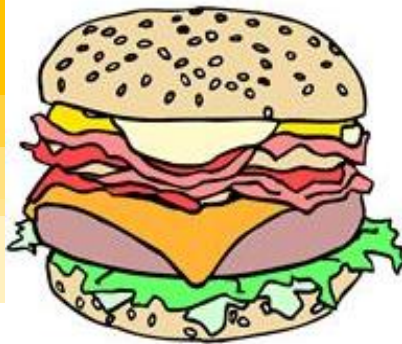
Does

it

all

fit

IMPORTANT note to readers: This was a poster presentation. Lay out 4 slides across; 5 rows down, in order to view correctly.



under the Golden Arches?

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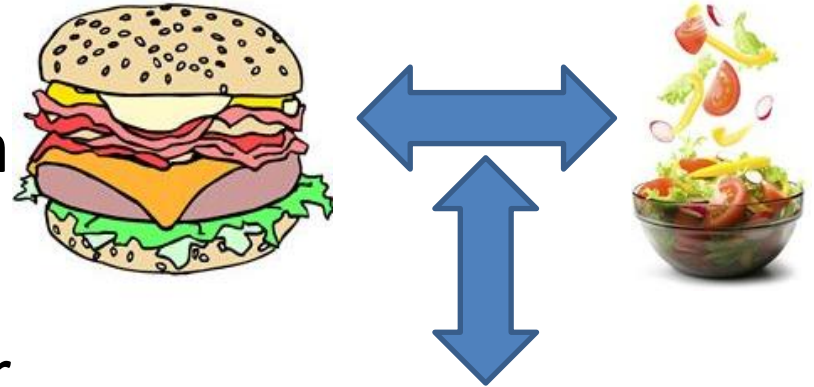
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How do firms transition their portfolios successfully?

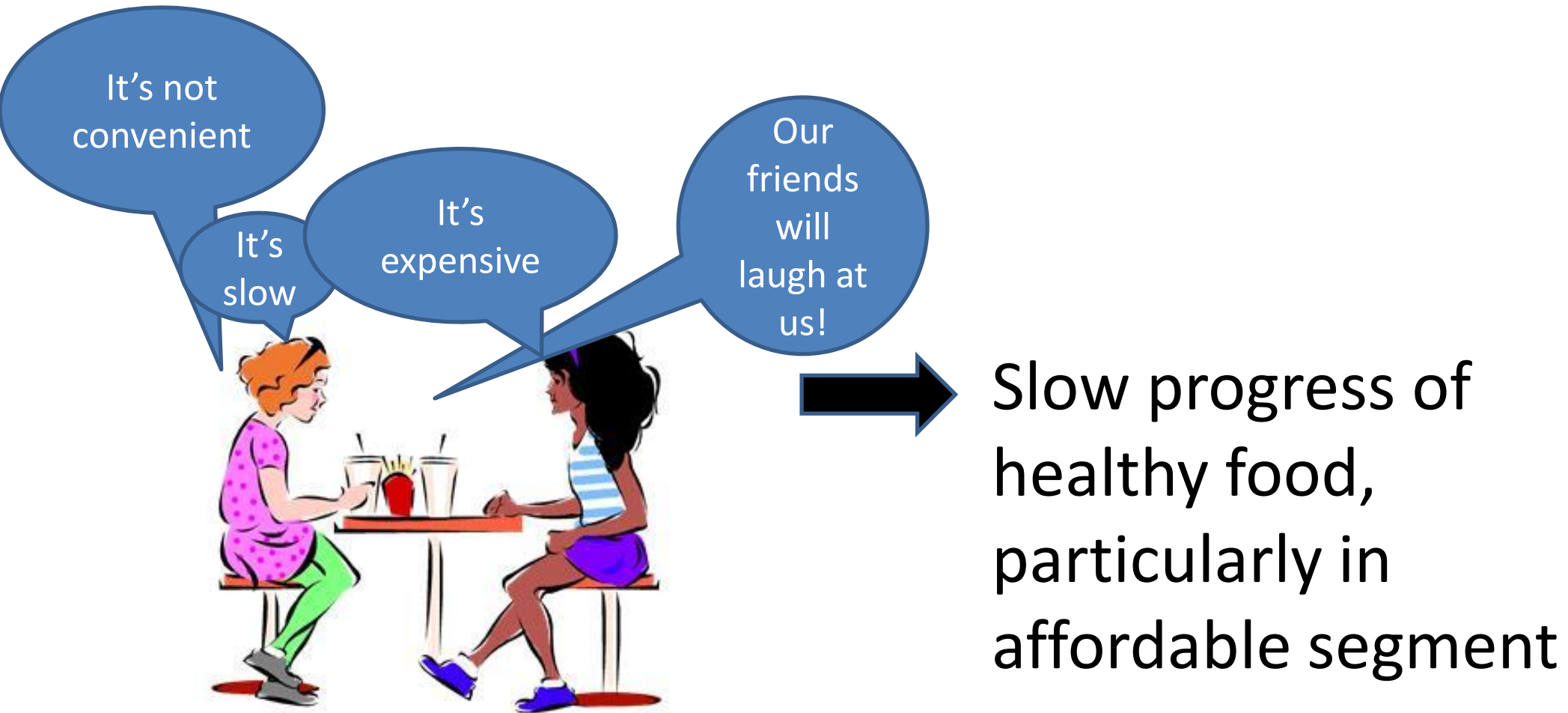
Our approach: we look at how the products interact with each other, and with the customers.

Our focus: customers and *their decisions among products*. Firms can 'work back' from these insights to plan their transitions.



This is distinct from most research on portfolio transition, which focuses instead on cognitive and capability aspects *at the company*.

If healthy food is better for you, why don't people eat it?



If we are supposed to eat healthier, why don't existing quick-serve restaurants change their menus?

Fresh
vegetables?
Supply chain
nightmare!

What
about our
brand?

Will we
lose our
existing
customers?

How 'close'
should the new
product be to
the 'old' one?

How will the
competitors
react?



Dynamics of disruptive horizontal product differentiation with consumer heterogeneity and network effects

This paper examines dynamics following introduction of nutritious food by a company well known for high-motivational and low-nutritious products. Employing a system dynamics model, we investigate how consumer dynamics affect uptake of the disruptive product. Our example is the burger chain McDonald's, which introduced salads, fruit and other healthier options in the early 2000s. Focusing on consumer choice, we analyze the process of newcomers trying McDonald's and either becoming "core" customers, or not. The paper distinguishes overall commercial success from that of the new product per se. We examine conditions that separate commercial success

Our Question:

How do the dynamics of **social-exposure-mediated network effects** affect *appeal to* and *choices by* existing and new customers, and through this, success after introduction of a new, distinct product?

New, distinct product

Increased overall profit can come many ways, not just by the new product selling well:

- Novelty improves brand distinction (Apple's GUI, 1980s)
- 'Feel-good' factor contributes to overall sales (corporate social responsibility; 'green' electricity)
- Canadian 'Lighter Choices' menu at McDonald's attracts mothers - whose children order more Happy Meals. *[2002 McDonald's Corporation Summary Annual Report]*
- L.L. Bean expands outdoor lifestyle products, but takes care not to become a 'designer' brand to avoid alienating existing customers *[Gale Contemporary Fashion]*

Positive 'side effects' boost existing product

Active brand 'enrichment'

Brand carefully managed to retain existing customers

interacts with brand in multiple ways

But there are also many ways to fail:

- Strong culturally-based opposition in the South, though a small minority nationwide, brings down New Coke in 1985 [Prendergast, 1994; Oliver, 1986]

- Bic rumoured to have had initial trouble expanding into surfboards, since Bic brand was associated with disposable products

Product distance in play

Social-exposure-mediated network effects in play

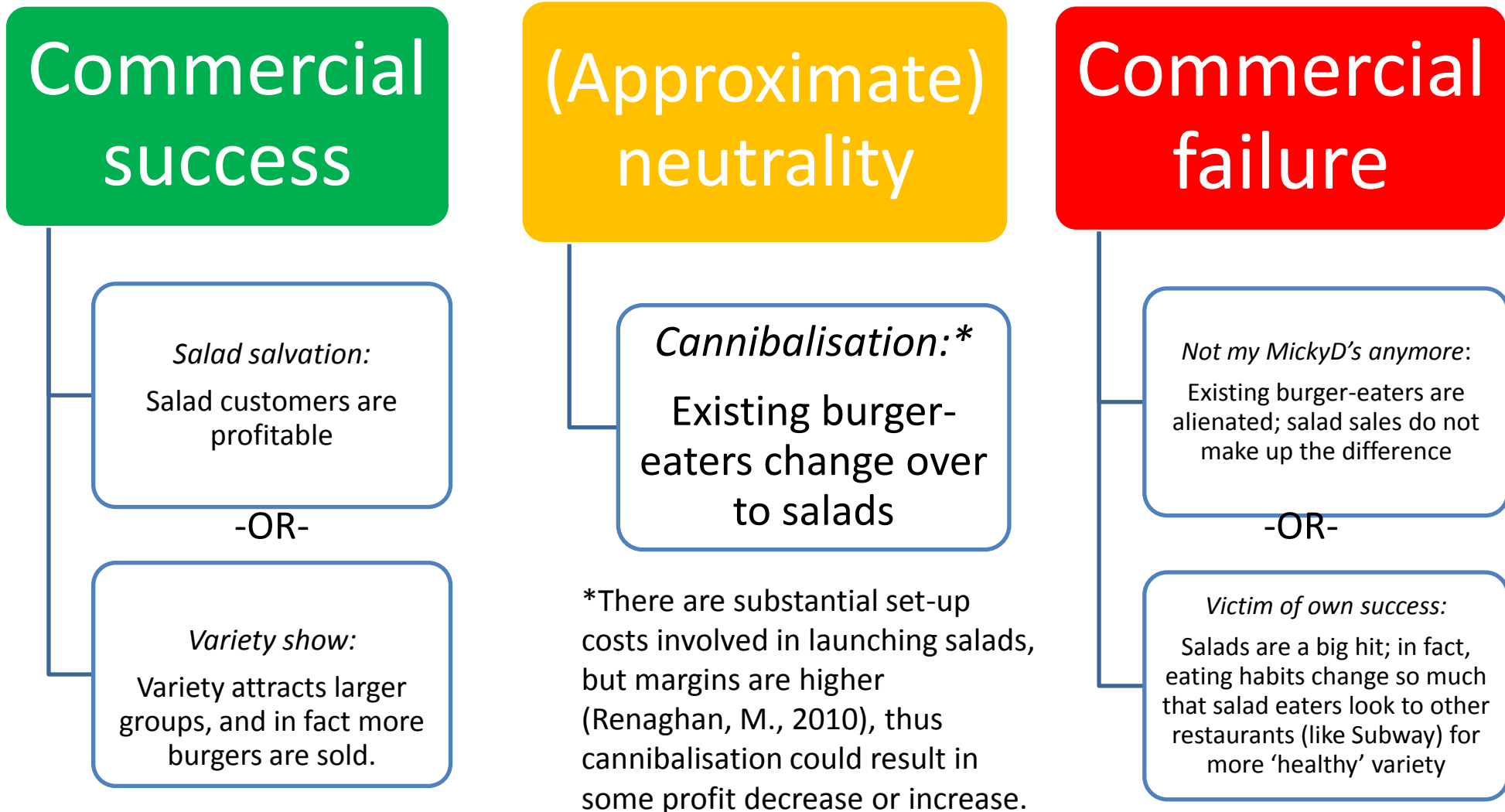
Difficulty in moving a brand 'up-market'

(by drawing in new types of customers, whether these are the profitable ones or whether they simply accompany more burger-eaters), neutrality (in which existing customers simply change over), or failure (by alienating existing customers so that they abandon the company). We focus on the role of heterogeneity in products and consumers, and on interactions with social exposure-mediated network effects. We consider in detail the large and inertial installed base of pre-existing burger eaters, and the degree to which its dominance is hard to unseat, drawing parallels with reactions to other disruptive and 'progressive' products in industries ranging from consumer products to electric vehicles to utilities.

Our case: 2002, and McDonald's is in trouble.

They look to broaden into healthier foods for revitalisation.

Note: Success and failure: defined as change in total profits, rather than just whether the new product sells.

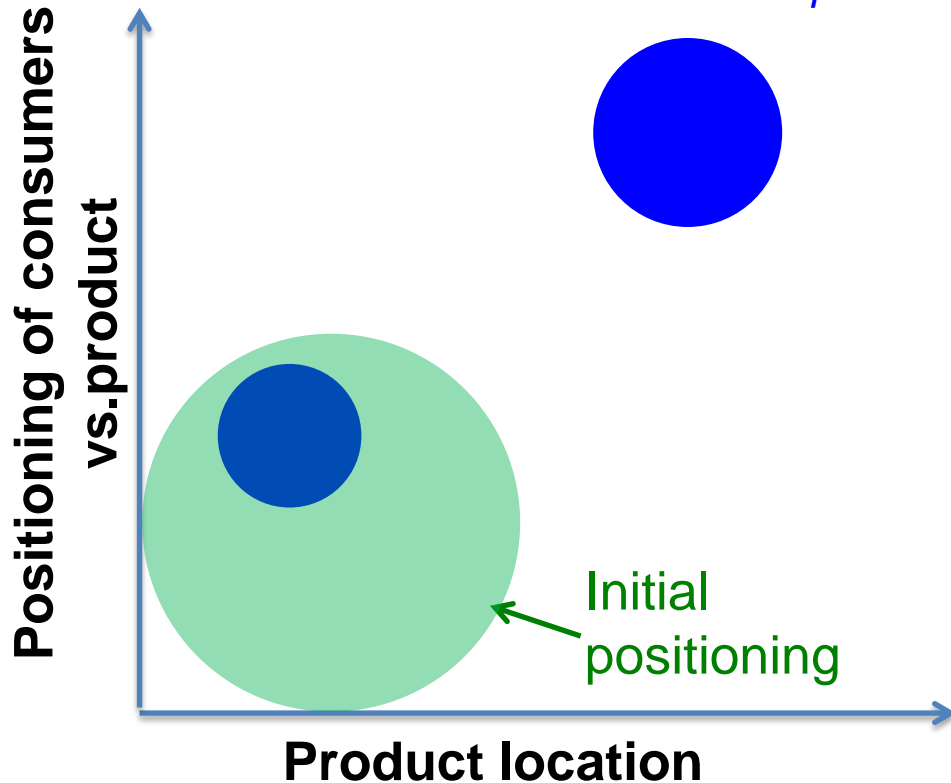


Adoption Pathways of Differentiated Products are Shaped by Social-Exposure-Mediated Network Effects

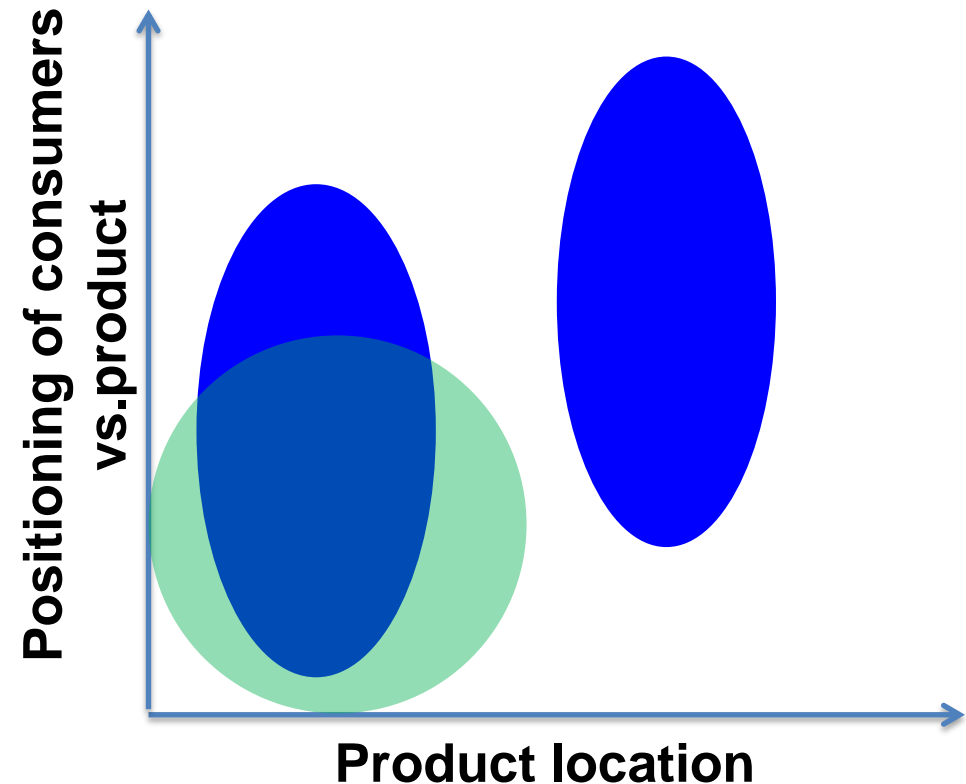
Social proximity between consumers and between products and consumers is important

Scenario 1: Disassociation

Size of area indicates number of adopters



Scenario 2: Network Expansion*)

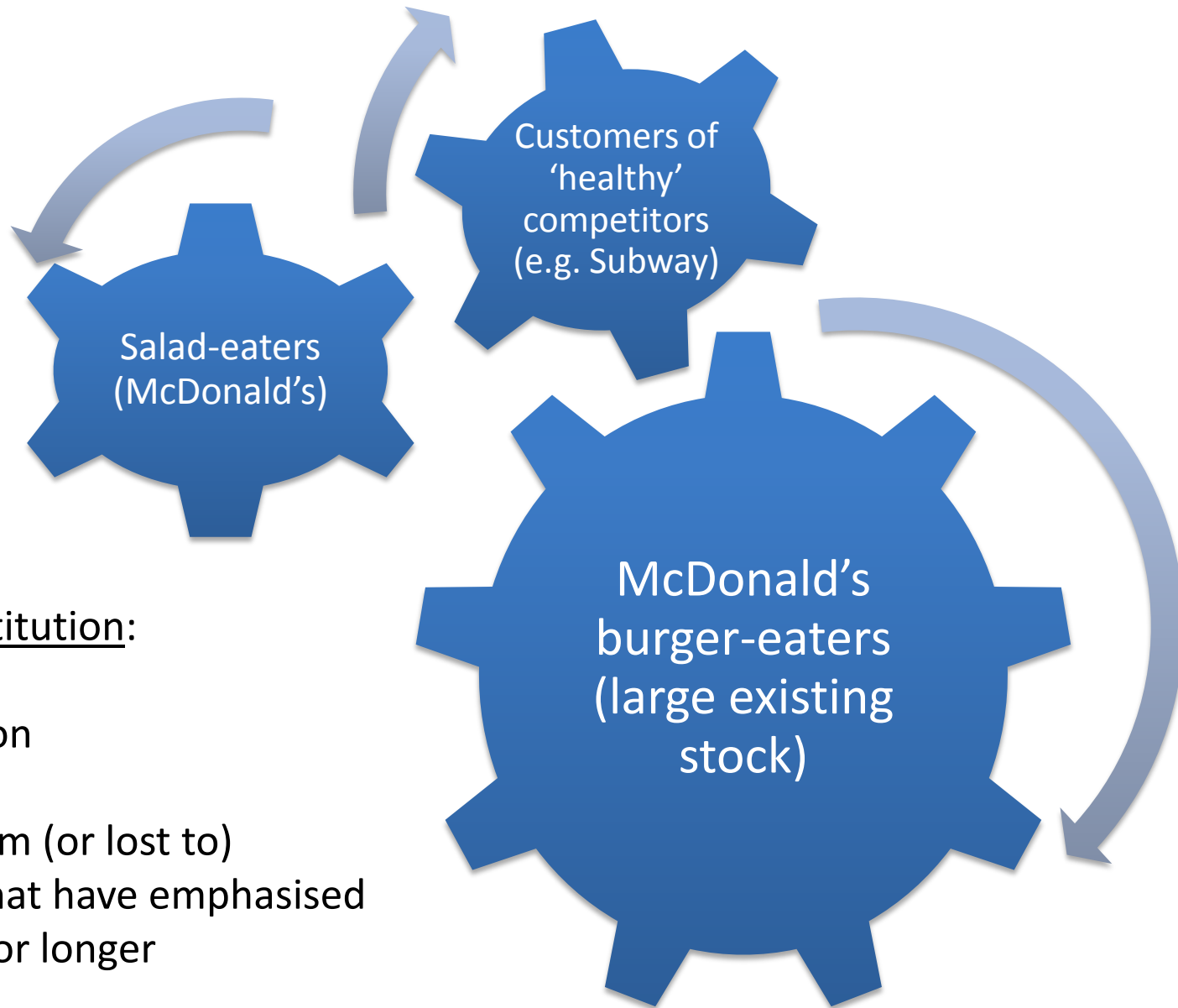


*) Several alternative scenarios may be hypothesized

Core constructs

- Network effects (Katz and Shapiro 1986)
- Network effects for differentiated products (Anderson, DePalma and Thisse 1992)
- Homophily and social influence (Lazarsfeld and Merton, 1954; Christakis and Fowler, 2007)

Substitution matters.

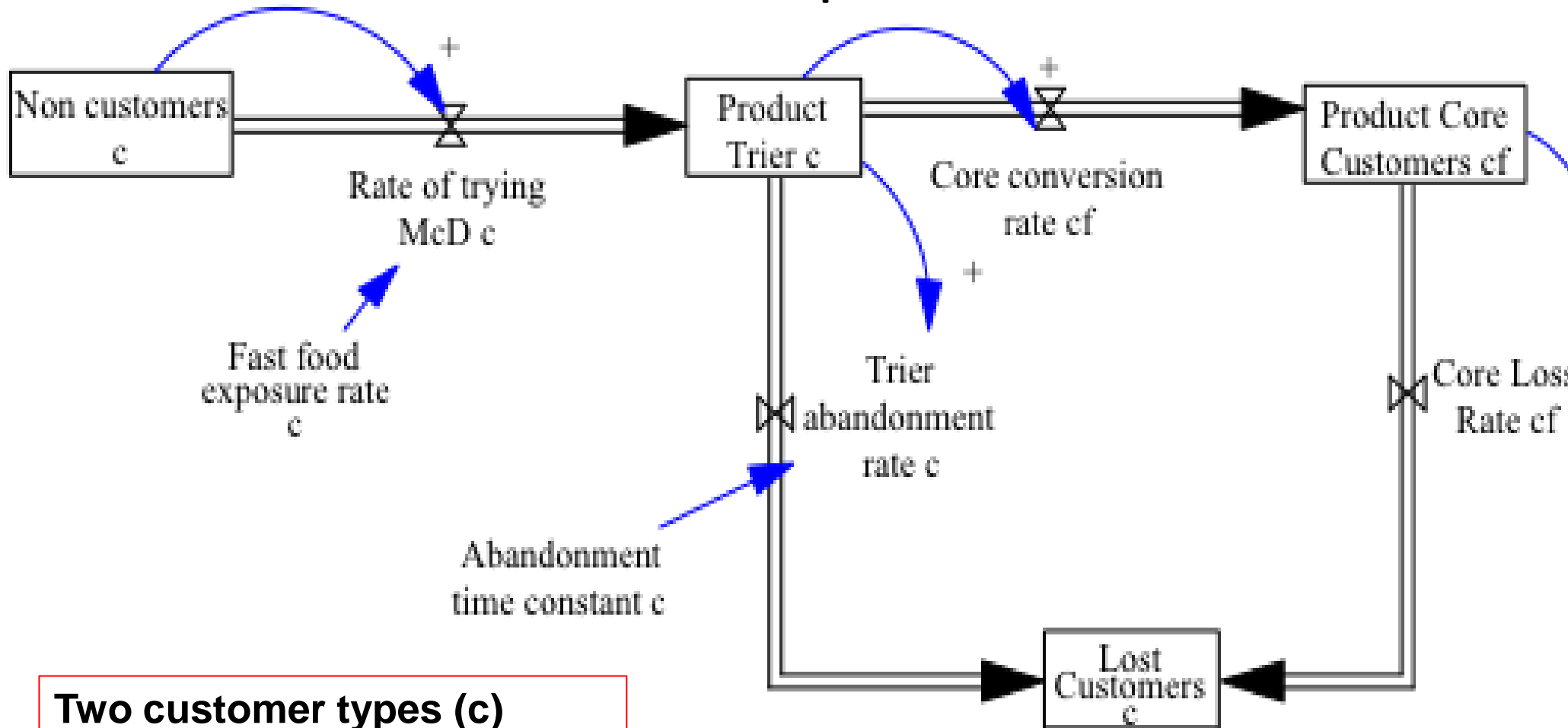


Forms of substitution:

- Cannibalisation
- Sales won from (or lost to) competitors that have emphasised 'healthiness' for longer

Base model

Core customers and product distance



Two customer types (c)

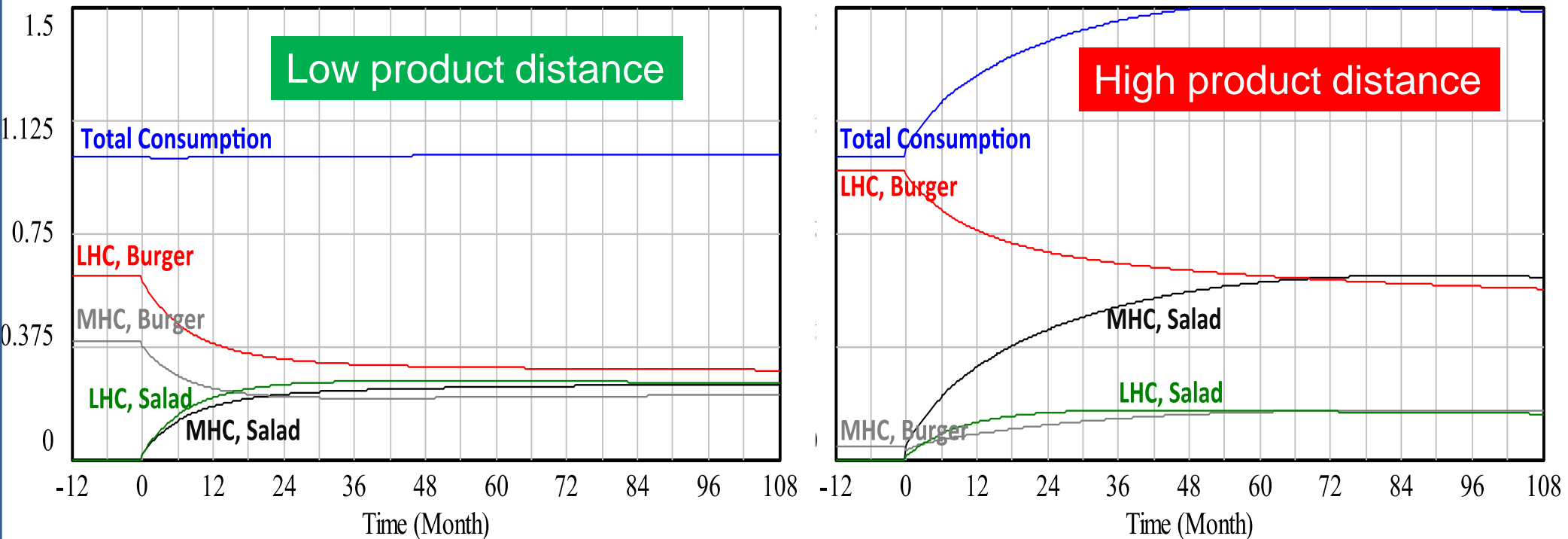
Less Health Conscious (LHC)
More Health Conscious (MHC)

Two types of food-choices (f)

BURGERS
SALADS

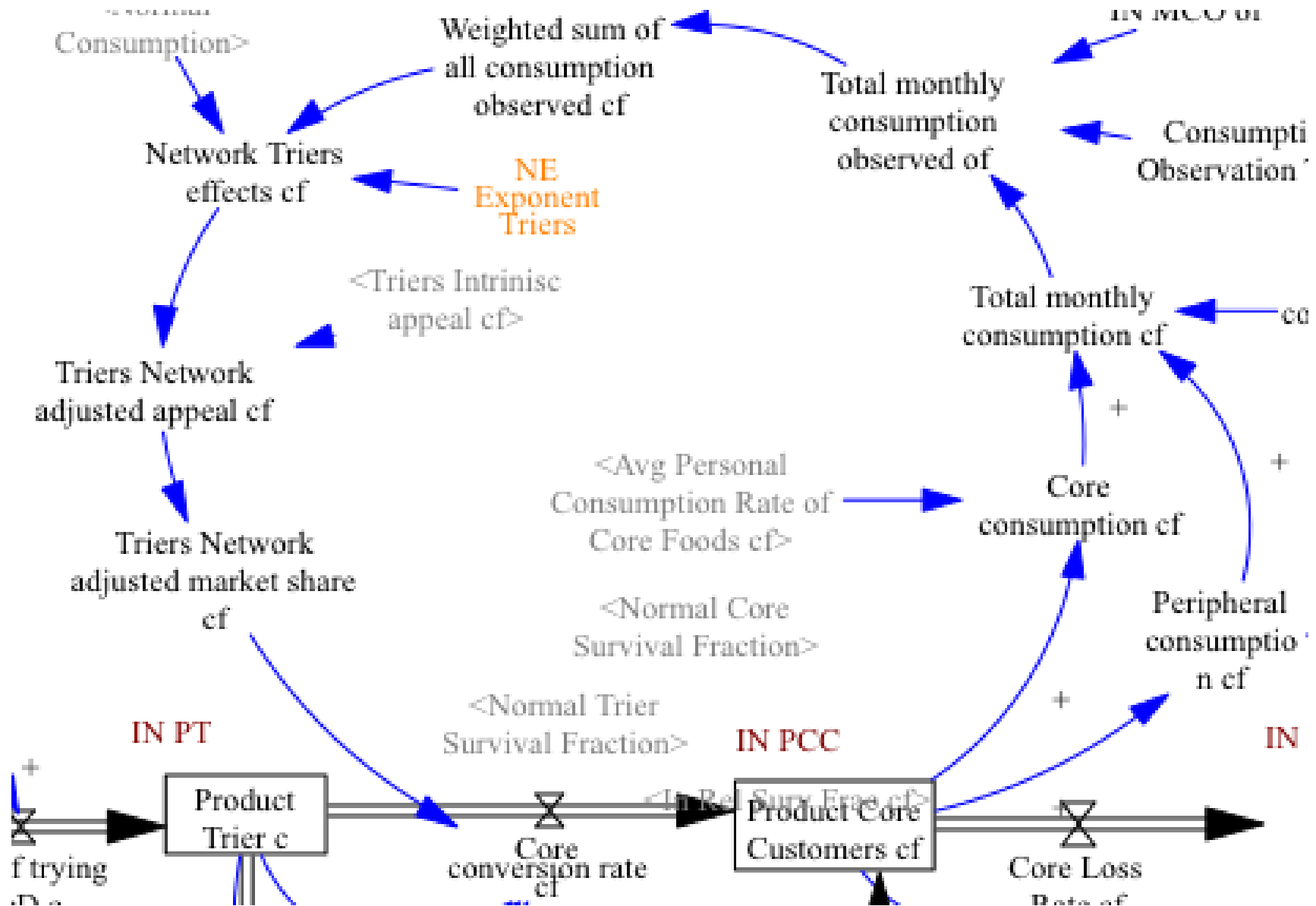
When product distance is higher,
difference in customer types becomes more important.

Relative consumption

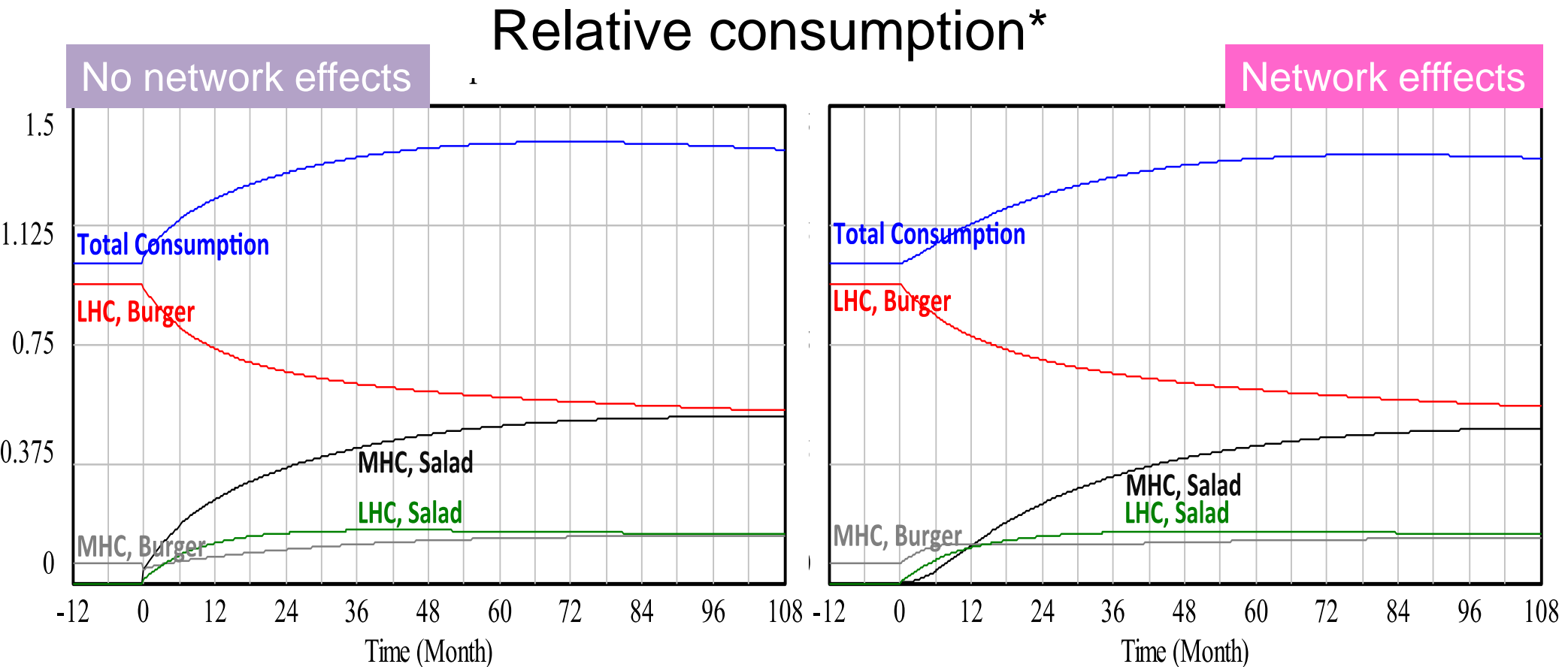


*Heterogeneous choice sets leads to preferences increasingly satisfied across the population.
Sales increase.*

Adding in network effects



But network effects reinforce the dominance of large stocks of customers of existing products

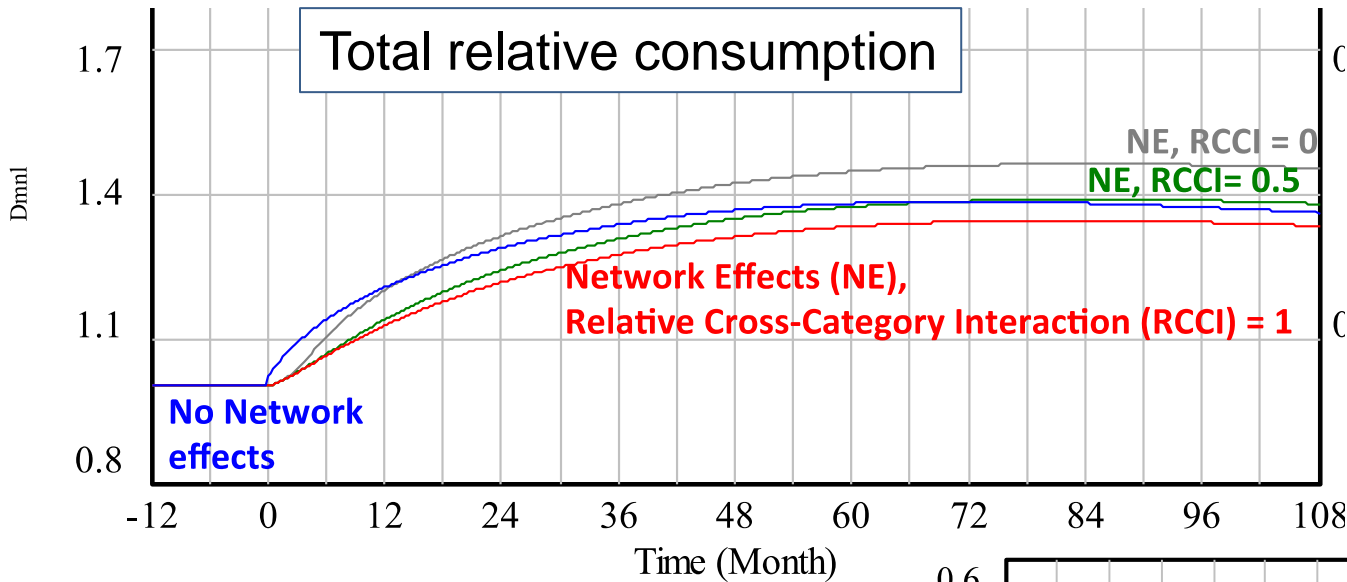


*product proximity fixed at $p = 0.25$ – relatively distant products

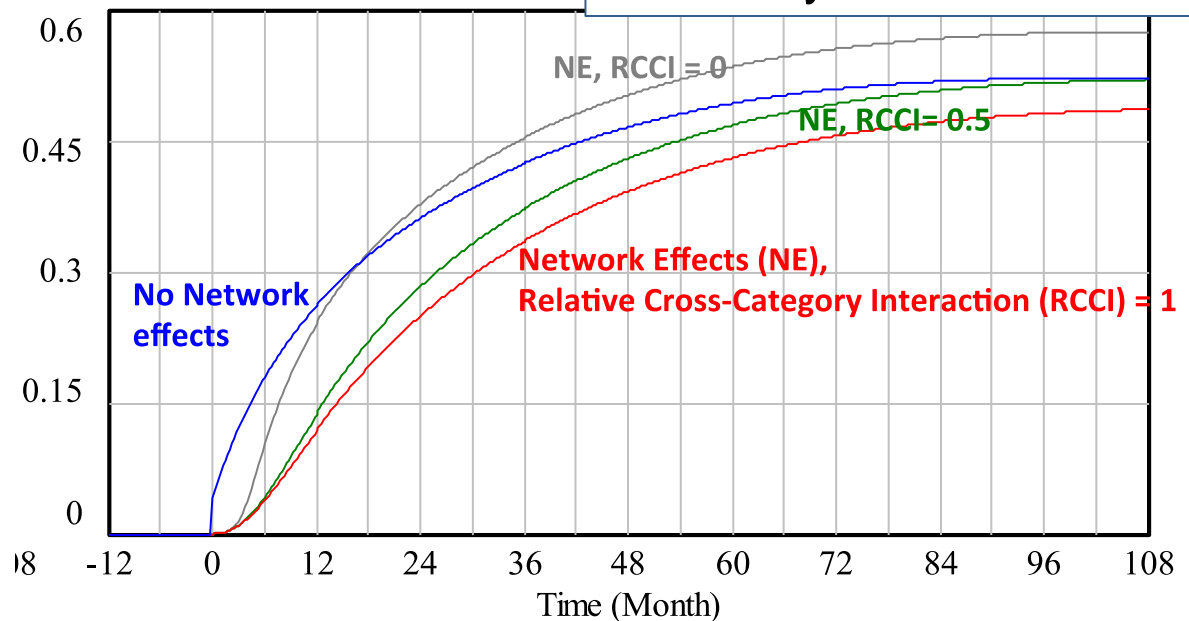
*Sales of new products, particularly to new customers, suffer.
Total sales also increase less.*

Homophily

However, relative strength of within-group network effects actually helps the 'encroaching' group.



Relative consumption of salads by MHCs



The lower the strength of social pressure *across* consumer types, as contrasted with those *within* a consumer type, the more that new products can benefit from peer-to-peer exposure among susceptible customers without 'frightening off' existing customers of the old product.

Planned extensions

- Detailed examination in and calibration to the context of MacDonald's case
 - The role of the installed customer base
 - And its Interaction with portfolio expansion rate
- Homophily in network interactions
 - Further examine, empirically, the role of “proximity” between customer types and network interactions
 - Mechanisms and factors present in network homophily

Conclusion and Implications and conclusion

- We examined the role of product, consumer distance, and asymmetry in network effects
 - Network effects suppress salad consumption among MHC customers, through existing base of LHC customers
 - However, once network effects are considered, high homophily leads not only to more consumption of salads by MHC, but to higher consumption overall.
- Implications for Practice
 - Overly simplistic consideration of network effects while attempting to transform their portfolios can lead firms to underestimate the difficulty both of attracting new types of customers, and furthermore, of doing so while retaining the original ones
- Contributions for Research
 - Our model combines network treatments and disruptive innovations to allow network pressure and distance between consumers in the introduction of new products

Selected References

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