

Strategic Issues for Biotechnology Companies

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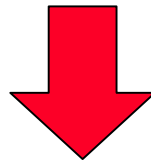
Professor Porter would like to thank Pierre Jacquet of Arthur D. Little for his assistance in preparation. This presentation draws on ideas from Professor Porter's books and articles including On Competition (HBS Press, 1998) and a forthcoming book. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means - electronic, mechanical, photocopying, recording, or otherwise - without the permission of Michael E. Porter.

Biotechnology

The Growth Opportunity

- Many health problems with inadequate treatment
- Aging population
- Explosive improvement in technological opportunity
- Most of the world receives substandard healthcare

A similar opportunity in food production and other fields



The challenge is to turn the opportunity into an attractive and viable business

The Strategy Fundamentals

- Goal of superior economic performance
- Corporate vs. business unit / competitive strategy
 - Core of strategy is at the individual business unit level
- Decide what industry(s) the company competes in
- Corporate performance depends upon:



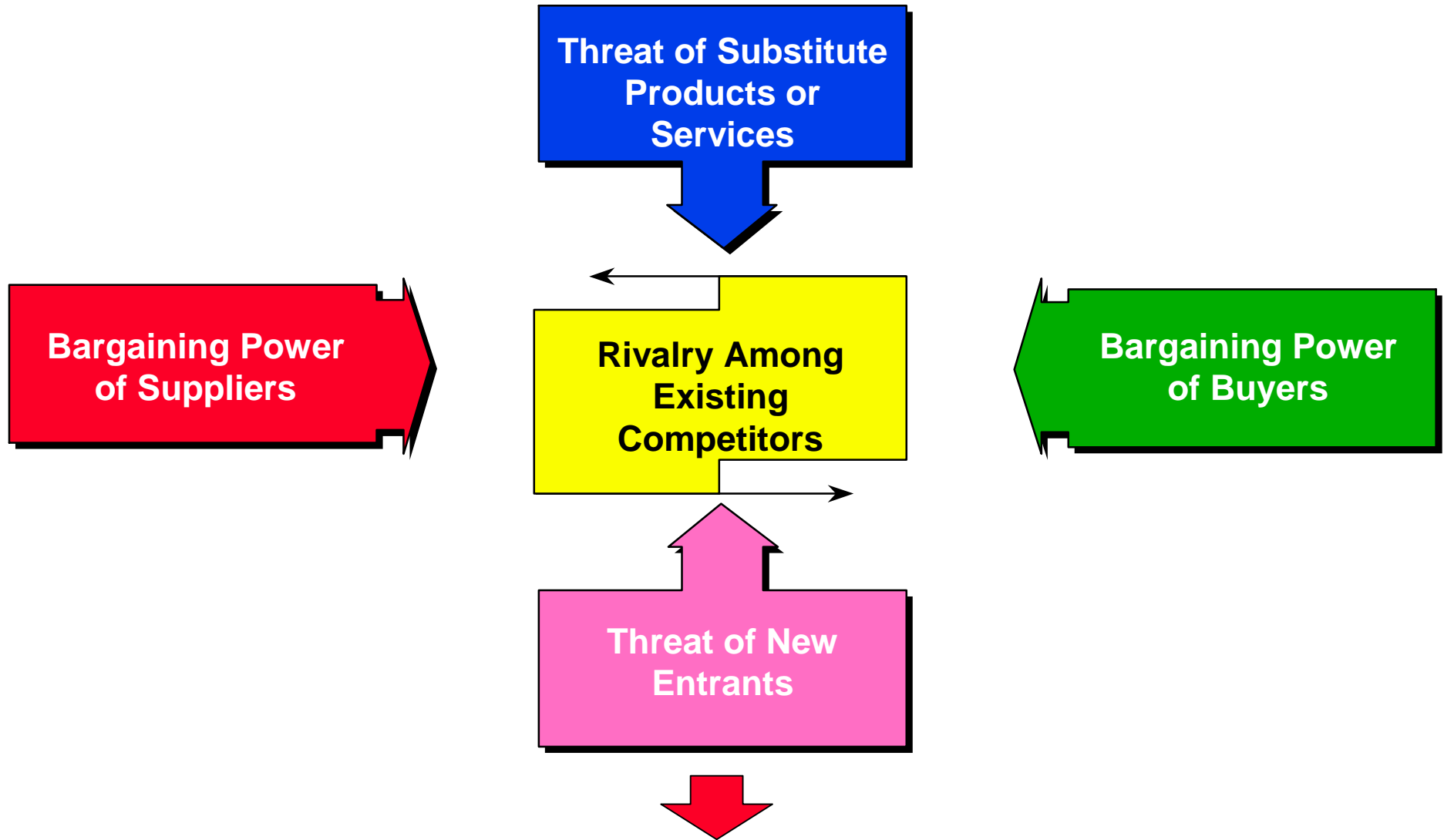
- *Rules of Competition*



- *Sources of Competitive Advantage*

The Strategy Fundamentals - continued

Sources of Long Term Industry Profitability



Companies must **shape** industry structure not just respond to it

The Strategy Fundamentals - continued

Types of Competitive Advantage

**Differentiation
(Non-Price Value)**



**Competitive
Advantage**



Lower Cost

The Strategy Fundamentals - continued

Determinants of Relative Performance



- Assimilating, attaining, and extending **best practice**

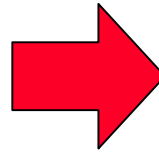


- Creating a **unique** and **sustainable** competitive position

- Choices / limits on the type of value delivered
- Making tradeoffs

The Implicit Strategy Model

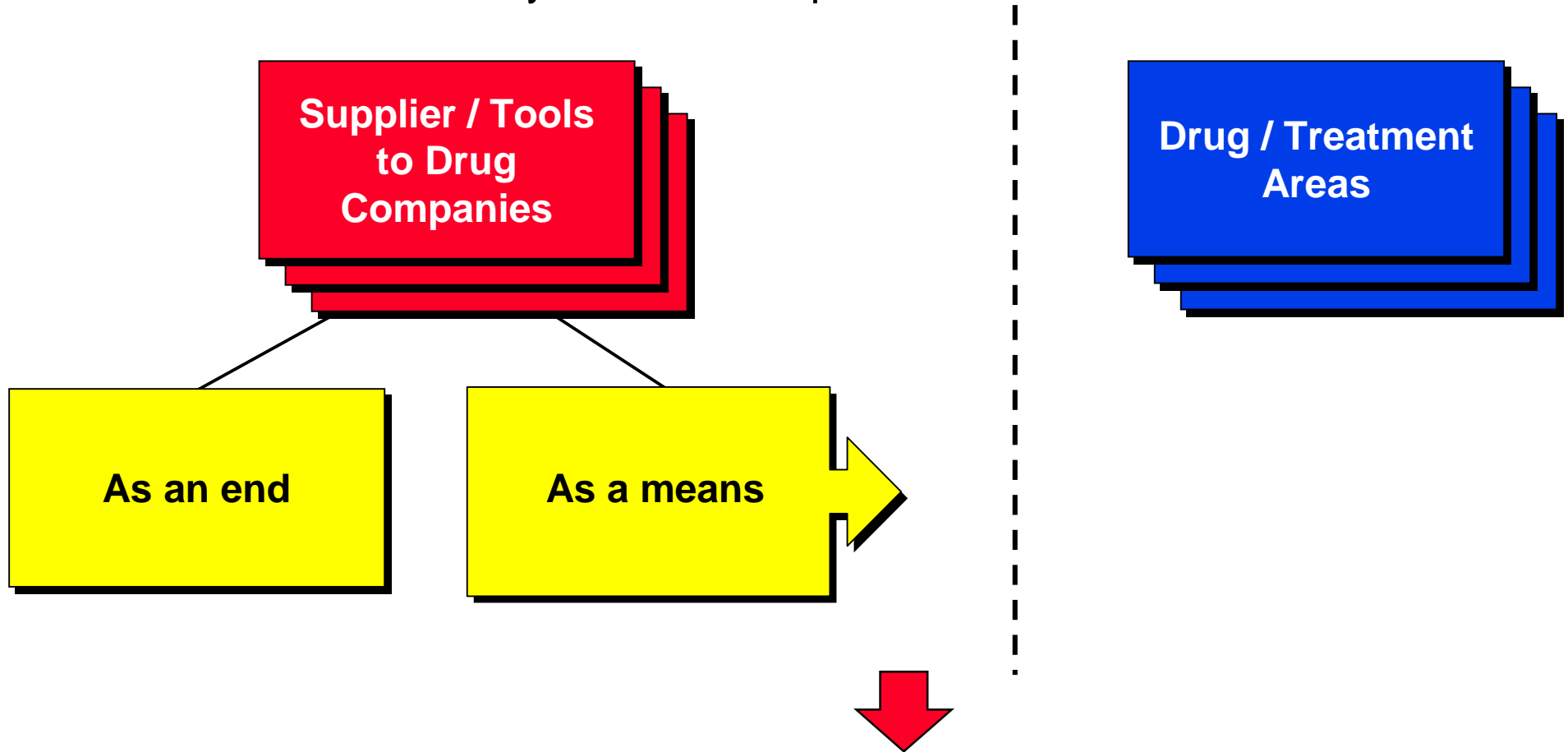
- Become a drug company
- Find a big market
- Good science
- Clever, pragmatic financing
- Define the “best” treatment
- Obtain a patent monopoly
- Diversify into new products
(Biotechnology is the industry)



- Profitability assumed if approval can be obtained
- Focus on getting to revenue, not on cost

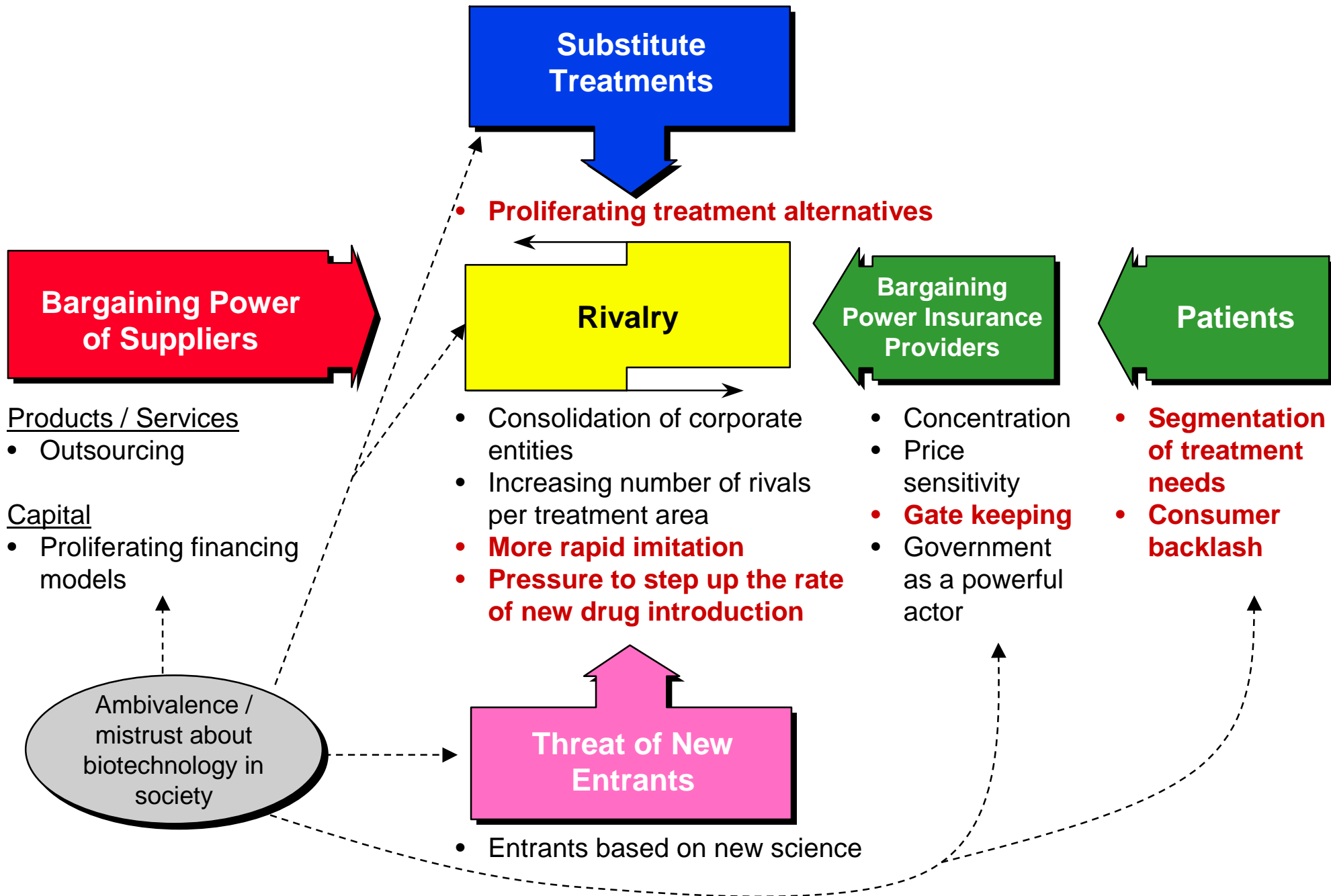
Strategic Issues for Biotechnology-based Companies

- What industry do firms compete in?



- Biotechnology is **not** an industry, but a collection of enabling technologies
- The choice of industry definition drives strategy
- There is no single way to succeed

Structural Trends in Treatment Area Industries



Strategic Issues for Biotechnology-based Companies - continued

Supplier / Tools
to Drug
Companies

Drug / Treatment
Areas

- Have been highly profitable if successfully entered
- Structural trends are problematic
- **New ways of competing** will be necessary
 - OE → Positioning
- Harder to sustain competitive advantages
- Cost will be important, not just differentiation
- Advantages will need to **widen beyond science** per se
- Diversification into many treatment areas has questionable value added in competitive terms

Strategic Issues for Biotechnology-based Companies - continued



Supplier / Tools to Drug Companies

“Infrastructure”

- High demand given the needs of biotechnology companies and the pressure to increase the rate of drug introduction by pharmaceutical companies
- Industry structures vary widely; some are **highly attractive**
- Competitive advantages may be **more sustainable**
- Increasing **strategic focus** by tool companies will be necessary
- Migration to becoming a drug company may no longer be the best goal



Drug / Treatment Areas

“B to C; B to B”

Strategic Issues for Biotechnology-based Companies - continued

- Corporate strategy - what is the value added of diversification across treatment areas?
- How to address the structural issues that affect the entire sector
 - Gate keeping / barriers to introducing innovations
 - Mistrust / suspicion about biotechnology in the wider society