

# THE PHARMACEUTICAL INDUSTRY

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School of Medicine and Dentistry

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What comes to mind when you think of the pharmaceutical industry?

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# Global Pharmaceutical Market 2003 – 2011

	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total world market (US\$ billions)	\$503	\$565	\$611	\$658	\$729	\$800	\$833	\$881	\$956
Growth over previous year	9.0%	7.8%	7.4%	7.0%	7.1%	6.4%	7.3%	4.5%	5.1%

Source: IMS Health Market Prognosis, May 2012

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Top 20  
Global  
Therapeutic  
Classes

	2011 Rank (US\$)	2011 Sales (US\$BN)	% Growth 2011 (LC\$)
Global Market		855.5	4.8%
Oncologies	1	62.2	5.5%
Respiratory Agents	2	39.4	7.3%
Antidiabetics	3	39.2	11.4%
Lipid Regulators	4	38.7	3.7%
Antipsychotics	5	28.4	9.4%
Angiotensin II Antagonists	6	27.4	-0.7%
Anti-Ulcerants	7	26.9	-6.4%
Autoimmune Agents	8	24.4	14.1%
Antidepressants	9	20.4	-1.5%
HIV Antivirals	10	17.4	9.5%
Platelet Aggr. Inhibitors	11	16.4	4.1%
Anti-Epileptics	12	14.1	10.1%
Vitamins & Minerals	13	13.9	6.1%
Vaccines	14	13.4	13.0%
Narcotic Analgesics	15	12.3	0.7%
Cephalosporins	16	12.0	0.6%
Non-Narcotic Analgesics	17	11.8	3.8%
Multiple Sclerosis	18	11.7	15.8%
Hospital Solutions	19	11.4	7.9%
Anti-Rheumatics, Non-Steroidal	20	10.8	5.4%

Source: IMS  
Health MIDAS  
December 2011

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Global Pharmaceutical Market  
By Region

	Market size (2011)	Forecast % growth (2012)	Forecast % growth (2012-2016)
Global	\$955.5	3-4%	3-6%
North America	\$347.1	1-2%	1-4%
Europe	\$265.4	0-1%	0-3%
Asia/Africa/ Australia	\$165.2	10-11%	10-13%
Japan	\$111.2	0-1%	1-4%
Latin America	\$66.7	13-14%	10-13%

Source: IMS Health Market Prognosis, May 2012

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Emerging Markets

As growth opportunities continue to dwindle in more developed economies, large healthcare companies have made the emerging markets a strategic priority.



As growth opportunities continue to dwindle in more developed economies, large healthcare companies have made the emerging markets a strategic priority.

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What questions does this data  
raise about the  
pharmaceutical industry?




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## Examples

- What is the role of the pharmaceutical industry in contemporary society? What is the relationship with medicine?
- Why has the pharmaceutical industry grown in western society? How is this different elsewhere?
- What health problems do pharmaceutical companies focus on and why?
- What are the interests of different stakeholders (e.g. shareholders, doctors, regulators, patients, public ) in this expansion?

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When you have completed the reading and participated in the taught components for this week, we hope you will be able to....

Outline different approaches to thinking about the work, power and impact of the pharmaceutical industry in relation to health, illness and medicine.

Critically reflect upon the relationship between patients / patient organizations and the pharmaceutical industry

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### Five main areas:

1. Thinking critically about a biomedical approach
  2. The concept of 'pharmaceuticalisation'
  3. Introduction to virtual seminar
  4. Summary
- Assignment

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### 1. Thinking critically about a biomedical approach

- An example – prescribing data
- Introducing pharmaceuticalisation

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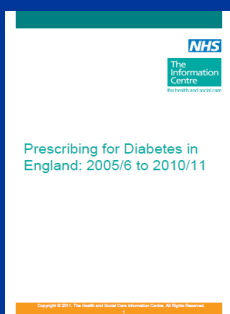
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### Example

Over the period 2005/6 to 2010/11 there was an increase of:

- 41.2 % (11.2 million) in the number of items prescribed for diabetes
- 41.1 per cent (£211.2 million) in the net ingredient cost

What does this data tell us?

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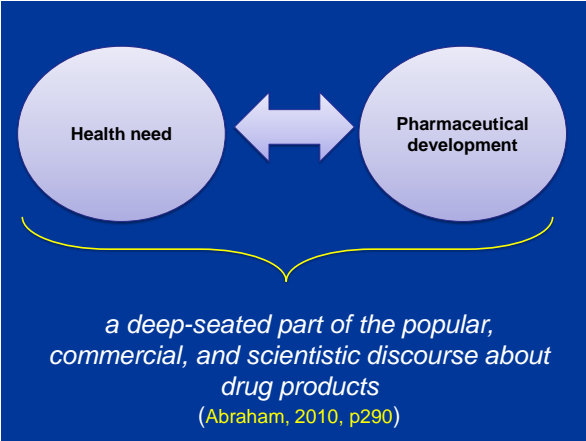
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## Pharmaceuticalisation

The translation or transformation of human conditions, capabilities and capacities into opportunities for pharmaceutical intervention (Williams et al, p711)

**SOCIOLOGY OF HEALTH & ILLNESS**

**The pharmaceuticalisation of obesity?** S. Wessnock, M. Smeaton, J. Williams, P. Marshall and A. Gable

Department of Health, Behaviour and Society, University of Liverpool, Liverpool, UK; School of Health, Behaviour and Society, University of Liverpool, Liverpool, UK; School of Health, Behaviour and Society, University of Liverpool, Liverpool, UK

**Abstract**

Obesity is a global public health problem, with prevalence increasing in many countries. The pharmaceutical industry has been instrumental in the development of new drugs to treat obesity, and this has led to a significant increase in the use of these drugs. This paper explores the process of pharmaceuticalisation of obesity, and the role of the pharmaceutical industry in this process. It discusses the ways in which obesity has been framed as a medical condition, and the ways in which the pharmaceutical industry has been instrumental in the development of new drugs to treat obesity. It also discusses the ways in which the pharmaceutical industry has been instrumental in the development of new drugs to treat obesity.

**Pills, Power, People: Sociological Understandings of the Pharmaceutical Industry**

**Abstract**

The pharmaceutical industry is a powerful force in society, and its role in the development of new drugs has been instrumental in the development of modern medicine. This paper explores the ways in which the pharmaceutical industry has been instrumental in the development of new drugs, and the ways in which it has been instrumental in the development of new drugs. It discusses the ways in which the pharmaceutical industry has been instrumental in the development of new drugs, and the ways in which it has been instrumental in the development of new drugs.

**17 The Sociological Concomitants of the Pharmaceutical Industry and Medications**

**Abstract**

The pharmaceutical industry is a powerful force in society, and its role in the development of new drugs has been instrumental in the development of modern medicine. This paper explores the ways in which the pharmaceutical industry has been instrumental in the development of new drugs, and the ways in which it has been instrumental in the development of new drugs. It discusses the ways in which the pharmaceutical industry has been instrumental in the development of new drugs, and the ways in which it has been instrumental in the development of new drugs.

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## Socio-technical process

The collage consists of four images. The top-left image shows a group of people in a meeting, with some people standing and some sitting. The top-right image shows a wall covered in many colorful sticky notes. The bottom-left image shows a person working at a computer. The bottom-right image shows a man in a suit, smiling.

- Networks of institutions, organisations, actors and artefacts

PLUS

- Chemistry-based technology

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## MACRO

Processes concerning the development, testing and regulation of pharmaceuticals

## MICRO

Processes relating to the meaning and use of pharmaceuticals in medical practice and everyday life

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## 2. Pharmaceuticalisation

- A. Redefining health problems
- B. Changing relationship with regulatory agencies
- C. The role of the media
- D. Using drugs for non-medical purposes
- E. Drug innovation

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## A. Redefining health problems

- Massive growth of drugs markets
- One of most profitable industries
- Pursuit of profit
- Global drug bill huge

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## Marketing diseases (not just drugs)



'widening the boundaries of treatable illness in order to expand markets for products' (Moynihan 2002)

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## Seeding trials



The true purpose of a drug trial is not always obvious  
Medical trials are not always conducted to test the drug – sometimes it's to seed the market

Ben Goldacre  
The Guardian, Friday 1 July 2011 21:00 BST  
[Jump to comments \(34\)](#)



The STEPS trial was a seeding trial, used to promote gabapentin and increase prescribing among investigators, and marketing was extensively involved in its planning and implementation.

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## Shaping trial outcomes



- Trials design bias
- Multiple trials with predictable outcomes
- Scientific misconduct
- Interpretive and rhetorical effects
- Publication bias

Pharmaceutical company funding of clinical trials is strongly associated with published results favouring those companies' interests

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- Reduced regulatory hurdle and increased the dependency of regulatory agencies on industry
  - Large financial stake in agencies
  - Increased speed of drug approvals
- Globalisation of established models of regulation

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**From Evidence to Theory: Neo-Liberal Corporate Bias as a Framework for Understanding UK Pharmaceuticals Regulation – Response to Alison Edgley**

Department of Sociology, School of Social Sciences and Cultural Studies, Centre for Research in Society and Media (CRISM), University of Sussex, Arts & Social Sciences

This paper addresses an *Asbestos's* check of twofold corporate trust as an account and explanation of its medicines regulation. It is argued that *Asbestos's* fails to express the trust in including regulatory transparency by reference to the *Asbestos's* of that trust. The *Asbestos's* of that trust is not a trust, but that the *Asbestos's* increase the role of the interests of the trust, particularly in connection with regulatory savings within the national health care system. Following on from this, it is shown that, by first designing the trust as *Asbestos's* controls, the use of status controlling the trust is actually setting priorities from the *Asbestos's* already and necessarily *Asbestos's* *Asbestos's* account of status as a control.

**Keywords:** cognitive bias; transference; medication regulation; pharmacists; induction; intuition.

In an interesting article in this journal about the US regulation of a class of pharmaceuticals used to lower cholesterol levels, known as statins, Alan Edgley argues that my thesis of neo-liberal corporate bias provides a flawed account of British medicines control. According to Edgley (2007, p. 343) it is not that medicines regulation is "too liberal and open to an accused or 'industry friendly' view". On his reading, we think it is that industry and

- Historical analysis of regulatory change
- Corporate bias
- Most important factor was influence of pharma industry:
  - ✓ Privileged strategic access
  - ✓ Decisive in determining regulatory policy outcomes

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How do you think that the western model of regulation might impact on developing countries?




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<http://www.youtube.com/watch?v=aoMnyUyCPuE>

<http://www.wemos.nl/>




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## C. The role of the media

- DTC advertising = media as marketing tool
- Marketing through education, information
- Provides diagnostic validity (particularly for new drugs)
- Coverage contradictory, but tends to serve pharmaceutical interests

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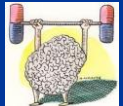
## 'the latest lifestyle "wonder drug" to hit Britain'

- British newspaper coverage of the drug Modafinil, that promotes wakefulness
- Media communicates market potential
  - Medical conditions++
  - Lifestyle
  - Military uses
  - Competitive spot



## D. Drugs for non-medical purposes

- Creation of new consumer markets
- Enhancement (augmentation)
  - Cosmetic surgery
  - Prescribing (e.g. human growth hormone)
  - Non-medical use e.g. modafinil



## 'the latest lifestyle "wonder drug" to hit Britain'

The potential market for Modafinil...extends far beyond the boundaries or confines of the doctor's surgery or sleep clinic, including a significant 'lifestyle' market...as with a range of other so-called 'enhancement' technologies designed to make us 'better than well' or 'better humans'...if not 'better than human'



# E. Drug innovation

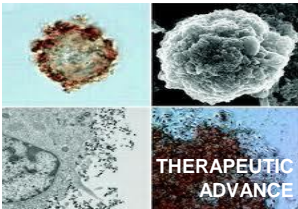
- Key role of the future in shaping the present
  - Drug developments (e.g. pharmacogenetics)
  - Hope for patients and public
  - Policy planning
- Specific focus on one path potentially rules out other options



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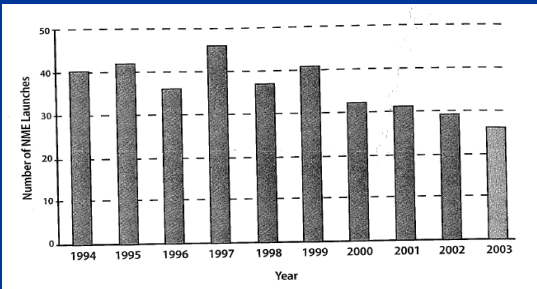
## PRODUCT INNOVATION



## THERAPEUTIC ADVANCE

- Required to demonstrate quality, safety, and efficacy of new products
- Product innovation is the key for pharma
- Similarity e.g. me-too's'
- Little requirement to demonstrate therapeutic advance
- No available data on new drugs that offer therapeutic advance in EU and Japan (some in US)

Number of new molecular entities first launched onto the world market between 1994 and 2005



Source: Centre for Medicines Research, 2005



### 3. Introduction to the virtual seminar

Thinking critically about patients, consumer groups and drugs

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### Pharmaceuticalisation

- A. Redefining health problems
- B. Changing relationship with regulatory agencies
- C. The role of the media
- D. Using drugs for non-medical purposes
- E. Drug innovation
- F. Patients and consumer groups**

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### One section, one paper




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## Virtual seminar discussion

Read the set reading. Consider how the role of **patients** and **consumer groups** *DOES* or *DOESN'T* support pharmaceuticalisation:

- Lead to post position (c200-300 words)
- One volunteer to post a counter-argument
- Others to review/reply

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**What are 'patients'?**

**What are 'consumer groups'?**



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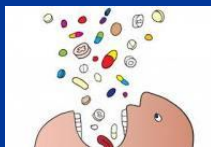
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## Patients and pills

According to Busfield (2006), pills are...

- frequently taken by those whose problems might be better dealt with by other means
- have unwanted side effects
- frequently produced and prescribed in doses that are far too high
- often prescribed for far too long

**What role do patients have in this process?**




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Should consumer groups accept money from drug companies?

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DEBATE

Should patient groups accept money from drug companies?

**YES** In the early 1990s, the pharmaceutical industry was accused of paying doctors to prescribe their own drugs. This led to a major scandal and the industry was forced to pay back millions of pounds. Since then, the industry has been accused of paying doctors to prescribe their own drugs. This is a serious problem and it is important that patient groups accept money from drug companies to help them fight this problem. Patient groups can help to ensure that doctors are not influenced by the industry and that they are able to prescribe the best drugs for their patients. This is a vital role and it is important that patient groups accept money from drug companies to help them do this.

**NO** Patient groups should not accept money from drug companies. This is because it could lead to a conflict of interest. If a patient group accepts money from a drug company, it may be seen as biased and it may be seen as if they are not acting in the best interests of their patients. This is a serious problem and it is important that patient groups do not accept money from drug companies. Patient groups should instead focus on providing support and advice to their patients and on campaigning for better healthcare. This is a more important role and it is important that patient groups focus on this.

DEBATE

Should patient groups accept money from drug companies?

Although clearly accepted that some forms of payment are acceptable, the industry has been accused of paying doctors to prescribe their own drugs. This is a serious problem and it is important that patient groups accept money from drug companies to help them fight this problem. Patient groups can help to ensure that doctors are not influenced by the industry and that they are able to prescribe the best drugs for their patients. This is a vital role and it is important that patient groups accept money from drug companies to help them do this.

There are many reasons why patient groups should accept money from drug companies. First, it can help to ensure that doctors are not influenced by the industry and that they are able to prescribe the best drugs for their patients. Second, it can help to ensure that patient groups are able to provide support and advice to their patients. Third, it can help to ensure that patient groups are able to campaign for better healthcare. This is a vital role and it is important that patient groups accept money from drug companies to help them do this.

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4. Summary

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Challenge to biomedicalism and an extension of medicalisation

Pharmaceutical industry seeks to shape science and knowledge, about products through various means

**Pharmaceuticalisation is a socio-technical process**

**De-pharmaceuticalisation is possible**

The media and medical profession play a role

What role do patients and consumers groups have in the process of pharmaceuticalisation?

Ethical issues are present in ANY kind of research... informed consent is key...

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## 5. Assignment

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Choose one of the following questions...

1. What do you understand to be the difference between 'illness' and 'disease'?
2. Outline what you understand by the term 'profession' and consider the key sociological concepts and thinkers relevant to analysing professions and their relevance to contemporary health care
3. Why is it useful to study patients' subjective illness experience?

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# Guidance

- Write an essay of up to 2000 (BSc) / 3000 (MSc) words, not including abstract, references, tables or diagrams.
- Include one reference to the virtual seminar discussions relevant to your example/question
- Guidance provided for EACH of the specific essay questions
- Guidance relevant to ALL questions (e.g. on presentation and referencing)
- All available on QMPlus



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