

# Yes, the ‘race to the bottom’ is real\*

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From the introduction of GCSEs in 1988 until 2011, the percentage of students awarded top grades - A to C, and since 1994, A\* to C - steadily rose<sup>1</sup> (1988, 41.9%; 1993, 51.5%; 1994, 52.8%; 2011, 69.8%). For many of those years, politicians in power celebrated the year-on-year increase as visible proof of the success of their educational policies; those few who dared to suggest that this was visible proof not of an improvement, but of an erosion, of standards were dismissed as misanthropic party-poopers. More recently, the tide has been turning: the ‘race to the bottom’ is now a familiar phrase, and one which has ministerial endorsement, whilst in 2012, the percentage of students receiving top grades at GCSE fell for the first time (from 69.8% in 2011 to 69.4%<sup>1</sup>), falling again, rather more dramatically, in 2013 (to 68.1%<sup>1</sup>), as shown in Figure 1.

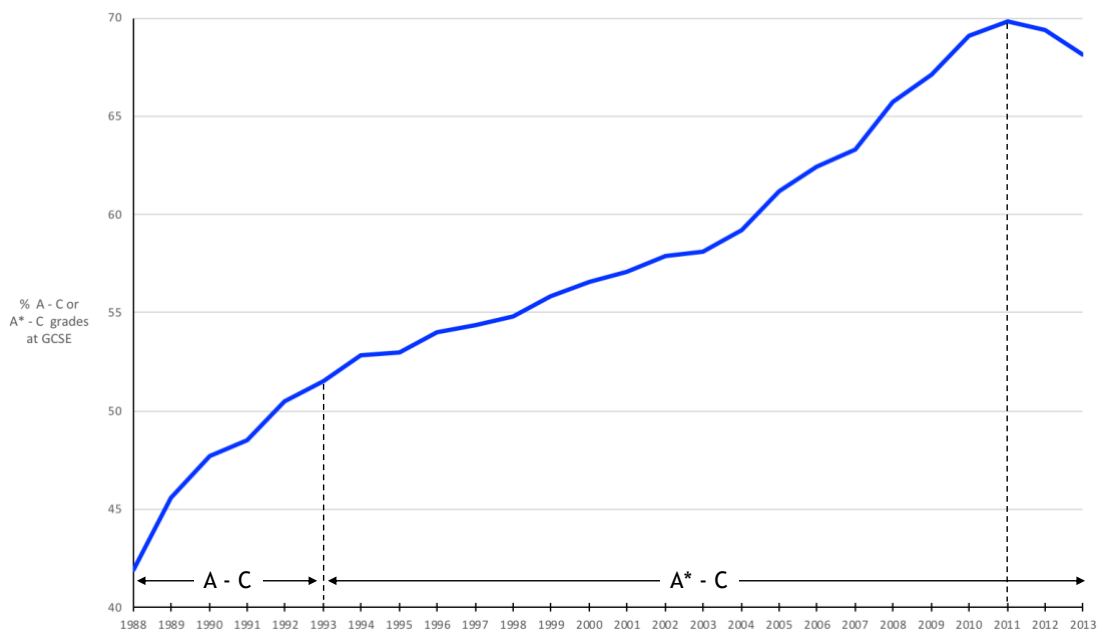


Figure 1

\* This document is based on a presentation, given jointly with Tim Leslie, Ofqual’s Director of Strategic Reform, at the annual conference of the [UK Chapter of the System Dynamics Society](#) in July 2014. The author gratefully acknowledges the support of Ofqual in doing the work reported here.

<sup>1</sup> <http://www.bstubbs.co.uk/gcse.htm>

Phrases such as ‘race to the bottom’ are emotive, and can cause protagonists to take progressively more entrenched positions as the debate rages. My intention here is to offer a more detached explanation of the observed behaviour of grades: an explanation that does not attribute blame, but demonstrates that the observed behaviour is the outcome of a complex system, in which - just like Adam Smith’s ‘invisible hand’ - different agents, taking decisions which are quite rational within their own contexts, collectively give rise to a result which no-one explicitly intended. And to do this, I will make use of the methodology known as ‘systems thinking’<sup>2</sup>, which represents the structure of complex systems in terms of a network of cause-and-effect relationships. If systems thinking is not familiar, do not be concerned - I shall explain what’s happening as the story evolves.

My starting point is the diagram shown in Figure 2, which captures the idea that *government funding and policies* influence the *quality of education*. This in turn determines the *number of higher grades awarded by awarding organisation A*, and also by *awarding organisation B*, which together result in the *total number of higher grades awarded*:

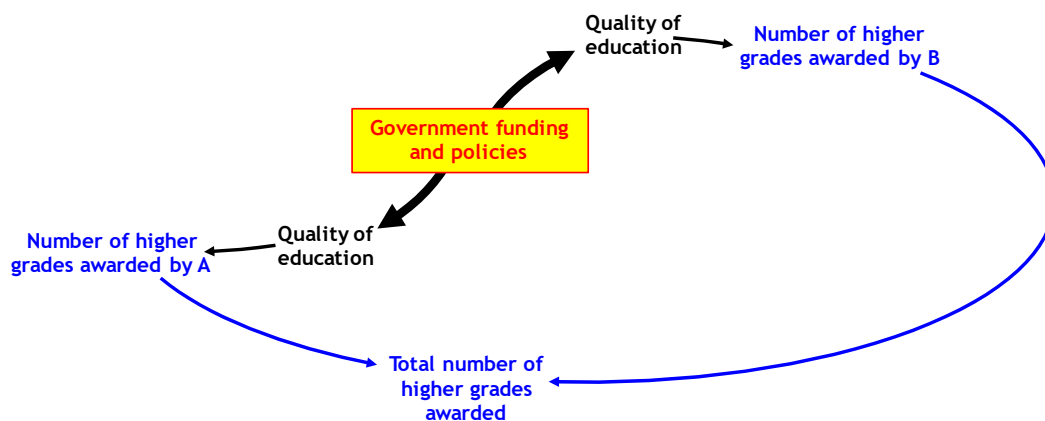


Figure 2

In this diagram, the ‘curly arrows’ identify two, different, features of any given cause-and-effect relationship. The first is the **direction of causality** - the *quality of the education* drives the *number of higher grades awarded*, rather than the other way around. The second is the feature known as the **polarity of causality**, as exemplified by the link from *quality of education* to the *number of higher grades awarded*: the **higher** the *quality of education*, the **greater** the *number of higher grades awarded*, and vice

<sup>2</sup> See, for example, [Seeing the Forest for the Trees - A manager’s guide to applying systems thinking](#), by Dennis Sherwood (Nicholas Brealey Publishing, London, 2002).

versa: the variable at the 'head' end of the arrow is moving in the same direction as the variable at the 'tail' end of the arrow - hence the solid arrow. This is known as 'direct polarity' or 'positive polarity': as we shall see shortly, for some cause-and effect relationships, the polarity can work the other way around, such that the 'head' variable and the 'tail' variable move in opposite directions. This is known as 'inverse polarity' or 'negative polarity', and is represented by a dashed arrow.

The overall implication of this diagram is that progressively more *government funding*, alongside progressively wiser *government policies*, together drive a steady increase in the *quality of education*, and hence a steady increase in the *total number of higher grades awarded*.

This is plausible. But is it necessarily true, or indeed the whole truth, especially when we take into account the time span from 1988 to 2011? Is there another possible explanation of the observed behaviour? And if there is, might this alternative be more plausible?

To explore this, consider, in the first instance, Figure 3...

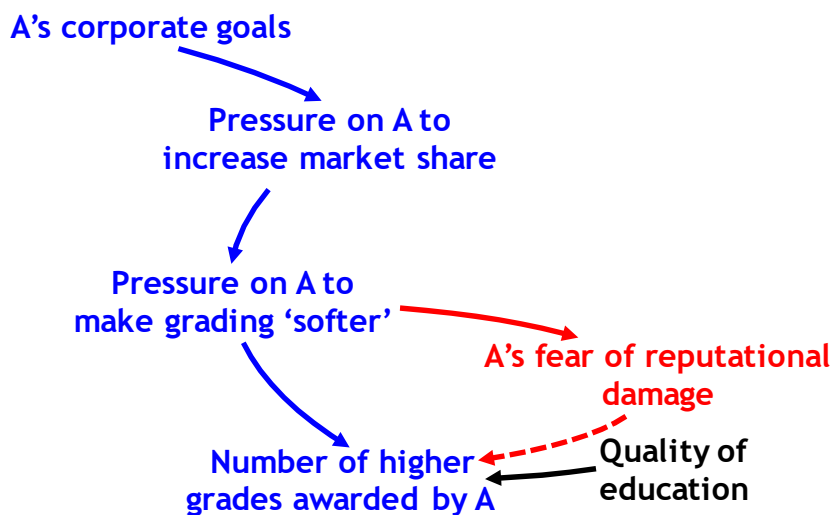


Figure 3

...which recognises that the *number of higher grades awarded* is indeed a manifestation of the *quality of education* - let's all rejoice in good, conscientious, energetic teaching and learning. In addition, this figure also represents the possibility that a hypothetical awarding organisation, A, in accordance with its *corporate strategy*, might seek to *increase its market share*. Let's imagine the conversation when this is discussed by the organisation's management. Yes, as a commercial enterprise, market share, profits and growth are all important. How might *market share* be increased? Perhaps someone suggests that a *softening of grades* might be attractive in the market place, to which there is, perhaps, general agreement - but

someone around the table points out that it would be foolish to *soften the grades* too much, for that risks *reputational damage*. After some debate, a decision is taken to *soften the grades* just enough to have the hoped-for market effect, but not so much as to cause a problem. This is all captured in Figure 3, where, *A's fear of reputational damage* has the effect of tempering the ardour of the *grade softening*, preventing the *number of higher grades awarded* being as high as it might have been, in the absence of this *fear*. For this cause-and-effect relationship, the *greater A's fear of reputational damage*, the *lower* the *number of higher grades awarded*, the link from *A's fear of reputational damage* to *number of higher grades awarded by A*. The variables at each end of the corresponding 'curly arrow' are therefore moving in opposite directions, this 'inverse polarity' being represented by the dashed arrow.

In the diagrams in this article, positive polarity is represented by a solid arrow, and negative polarity by a dashed arrow: we note that other sources may use solid arrows throughout, indicating direct (positive) polarity by an adjacent + sign, or the letter S, and inverse (negative) polarity by a adjacent - sign, or the letter O. It may seem that identifying the polarity of each link merely adds clutter and complexity: as we shall see, in fact, the explicit identification of the polarity of each link is very helpful in providing an insight into the dynamic behaviour of a complex system, with many inter-connected links.

What happens next is shown in Figure 4:

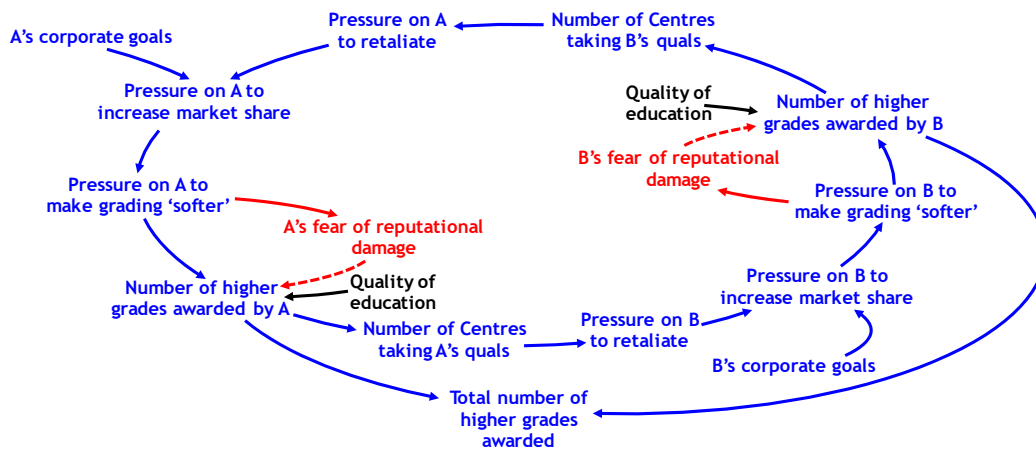


Figure 4

In a competitive market, awarding organisation *B* senses what is going on, and *retaliates* by *softening its grades* too... which causes *A* to *retaliate* in turn, so fuelling a vicious circle, in which *grades progressively soften*. Ah! The race to the bottom... a race which is slowed only by the *A's and B's fear of reputational damage*, for neither *A* nor *B* wishes to 'debase the currency' - at least not too much in too short a time.

The structure of this diagram - the closed loop from *pressure on A to increase market share* and back again - indicates the systemic nature, and prolongation, of the problem: technically, a closed loop of this nature is termed a **reinforcing loop**<sup>3</sup> for it reinforces itself on each turn. Furthermore, this loop can be triggered simply by a belief: if awarding organisation *A* suspects that awarding organisation *B* might be thinking about softening its grades, then this belief might cause *A* to soften its own grades as a 'pre-emptive strike'. *A* might be wrong in this belief, but that doesn't matter: once either *A* or *B* have taken the first step, the system takes over - a system in which each individual agent is acting quite rationally in its own interests. And in a market with more than two awarding organisations, the system is just the same, but harder to represent on a two-dimensional page.

The 'story so far' has assumed that *the softening of grades* is the only way in which *A* and *B* can compete; Figure 5 takes the story one step further and allows for the possibility of *competition on grounds other than grades*:

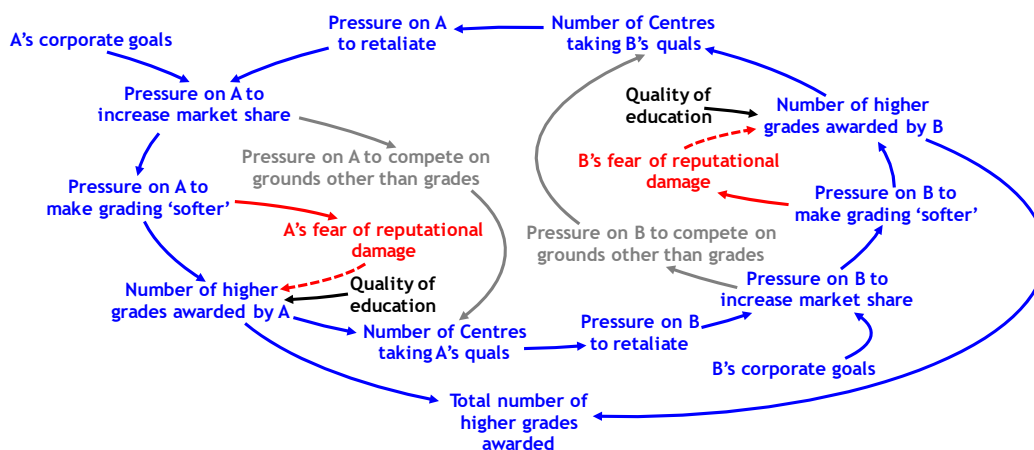


Figure 5

This introduces a second reinforcing loop (the 'hour-glass' shape in the middle) by which *A* and *B* might, in principle, be able to compete, for example, on price, or on some other 'dimension' - just as in other markets, from airlines to restaurants, where different suppliers offer different packages of benefits to different customers at different prices.

The awarding organisations, however, are not the only agents in this system. Let's now introduce a Centre Head, who - seeking to obtain Ofsted's

<sup>3</sup> See, for example, [Seeing the Forest for the Trees - A manager's guide to applying systems thinking](#), by Dennis Sherwood (Nicholas Brealey Publishing, London, 2002), page 54.

approval and to meet the government's performance measures - wants as many top grades for the Centre as possible:

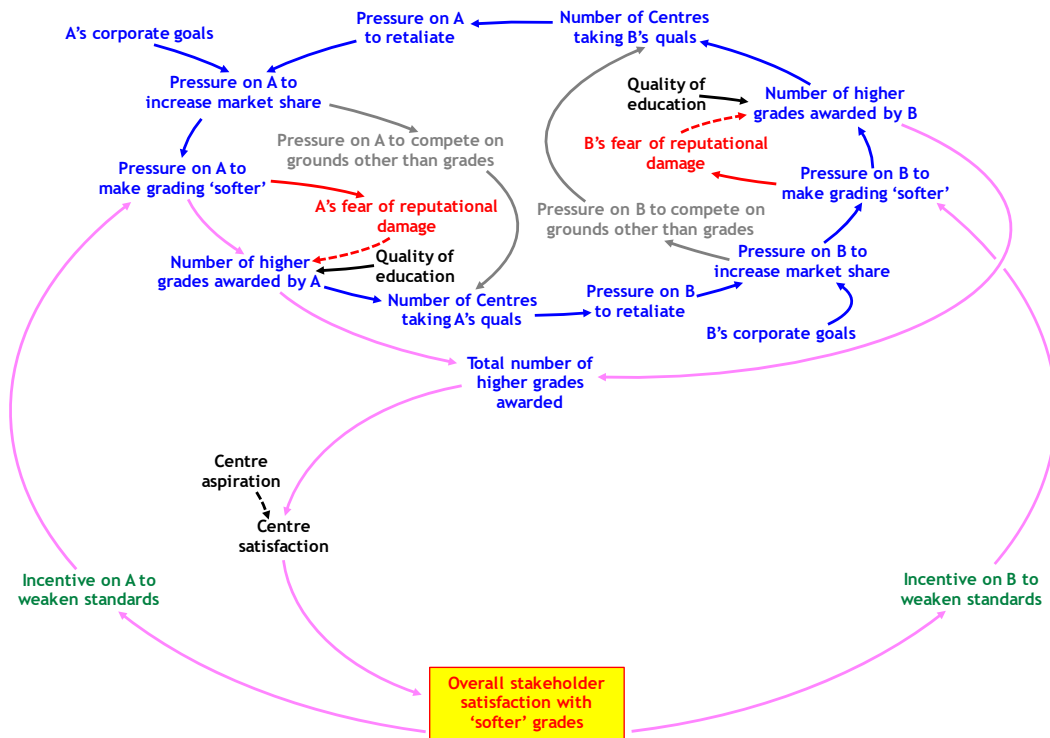


Figure 6

The *Centre's aspiration* might be, for example, that 60% of its students obtain A\*-C grades. If in fact 63% of students are awarded higher grades, the Centre Head is indeed pleased; alternatively, if only 57% of students receive A\*-C grades, the Centre Head is disappointed. In this case, *Centre satisfaction* can be represented by the difference between the actual *number of higher grades awarded* and the *Centre aspiration* (hence the combination of the direct and inverse links), and this *satisfaction* is sensed by the awarding organisation as *incentive to weaken standards* even more - setting up two additional reinforcing loops which further feed the 'race to the bottom'.

An inference from Figure 6 is that the reinforcing loop on the lower left, which applies to awarding organisation A alone, can operate entirely of its own accord, without the need for awarding organisation B's existence. This demonstrates that the 'race to the bottom' is not necessarily a feature of a competitive market place for awarding organisations, and would not be solved by a market structure in which a monopoly in any given subject were granted to any one awarding organisation. Yes, the competitive market helps fuel the 'race the to the bottom', as illustrated in the top half of the figures; but even a monopoly supplier will want to keep its customers happy.

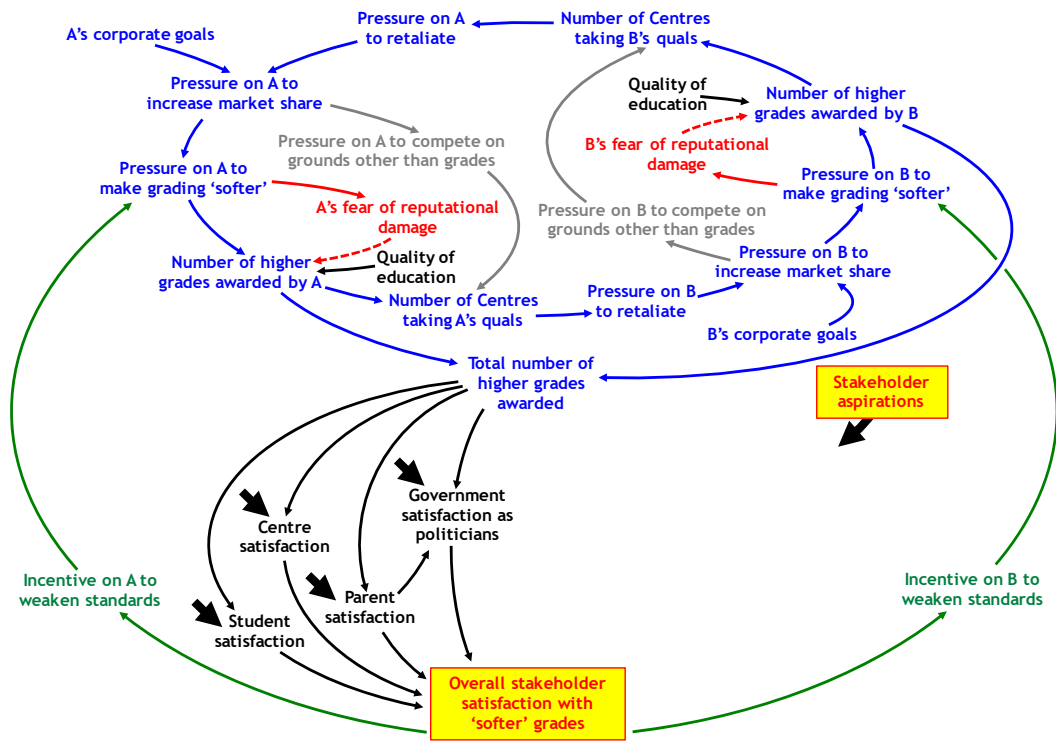


Figure 7

Figure 7 takes matters one step further, and shows that many other stakeholders have a vested interest in 'softer' grades. *Students* like getting high grades, as do their *parents*; and *politicians* trumpet the success of their policies - whilst keeping a very close eye, as elections draw nearer, on those happy *parents'* voting patterns. Figure 7 illustrates a very powerful system, a system which no individual, however conscientious, can oppose. Yet it is a system that no-one, deliberately, 'designed' - rather, it is the result of an inadvertent coalition of different communities, all of whom happen to benefit from gently softening grades. Everyone is a winner. And everyone likes winning.

Or rather nearly everyone. Figure 8 captures the possibility that one particular community - *higher education* - might not be so happy, if only because it makes their admissions process harder:

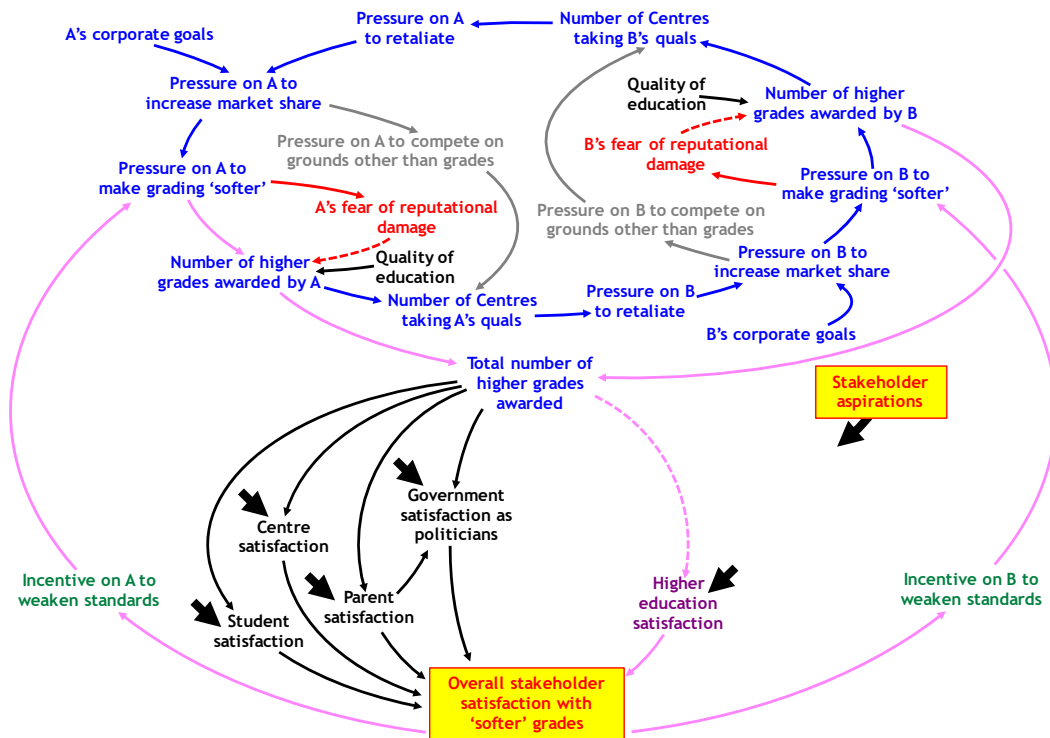


Figure 8

A higher *number of top grades* is disliked by *higher education* (hence the inverse link), so creating two more closed feedback loops. Structurally, these two new loops are different from the loops we've seen so far: if you trace around either of the two new closed loops, you'll see that each contains a single inverse link, whereas all the other loops we've seen so far are formed only of direct links. The action of these new loops is to put *pressure on the awarding organisations to strengthen, not weaken, standards*. Technically, these two new loops are known as *balancing loops*<sup>4</sup>, and they act to arrest the 'race to the bottom'. But the *higher education* lobby is probably less powerful than the *Centre-student-parent-government* coalition pulling the other way, so the 'race to the bottom' continues. The higher education lobby, however, is not alone, for Figure 9 shows some allies:

<sup>4</sup> See, for example, [Seeing the Forest for the Trees - A manager's guide to applying systems thinking](#), by Dennis Sherwood (Nicholas Brealey Publishing, London, 2002), page 55.



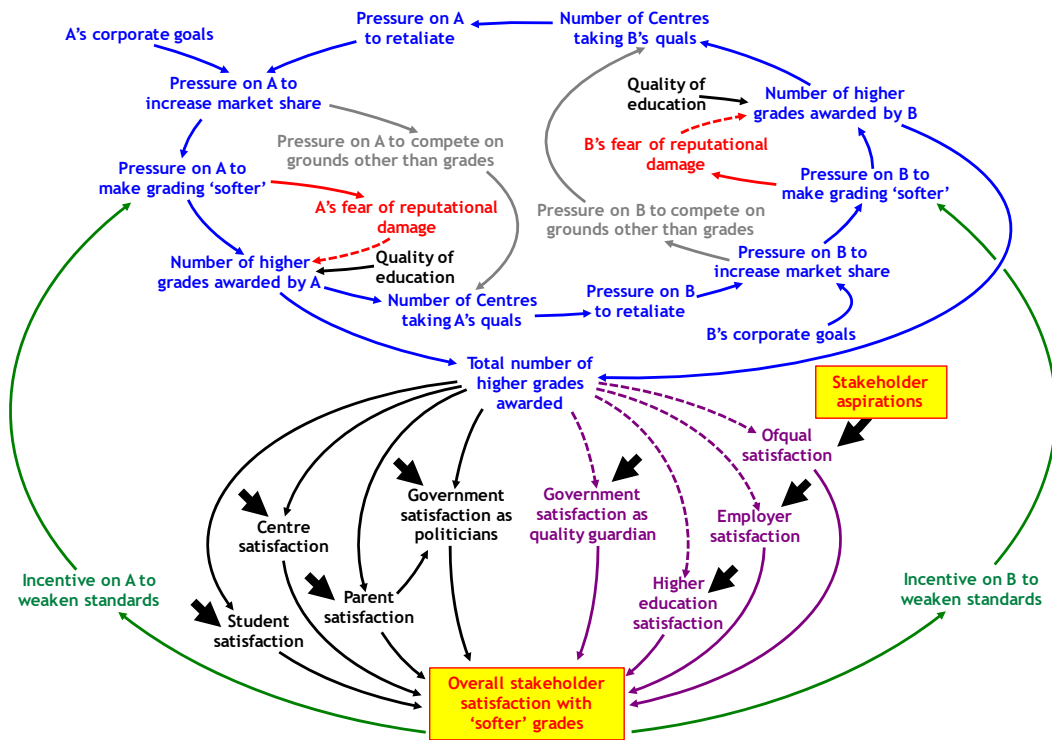


Figure 9

The *employer* community also lobbies for higher standards, but it is highly fragmented and relatively weak; *government*, however, is potentially strong, and can in principle exert power *as the guardian of quality* if it wishes.

Figure 9 is nearly at the end of our story, and depicts a complex system, with many stakeholders, all of whom, quite logically, want outcomes in their own interests - *awarding organisations* want to meet their corporate objectives, *Centre Heads* want success, *students* want high grades, *parents* want to be proud of their children, *politicians* want to be re-elected. This is a powerful coalition indeed, a coalition which, from 1988 until 2011, turned not just a blind, but a positively approving, eye to the 'race to the bottom'. Ranged against this coalition were a few 'elitist' academics, some 'grumpy' business people, and the occasional 'rogue' MP. Within a system as depicted in Figure 9, which 'side' is likely to 'win'?

But there is one more player to appear on our stage. Enter Ofqual, which started operations in 2010:

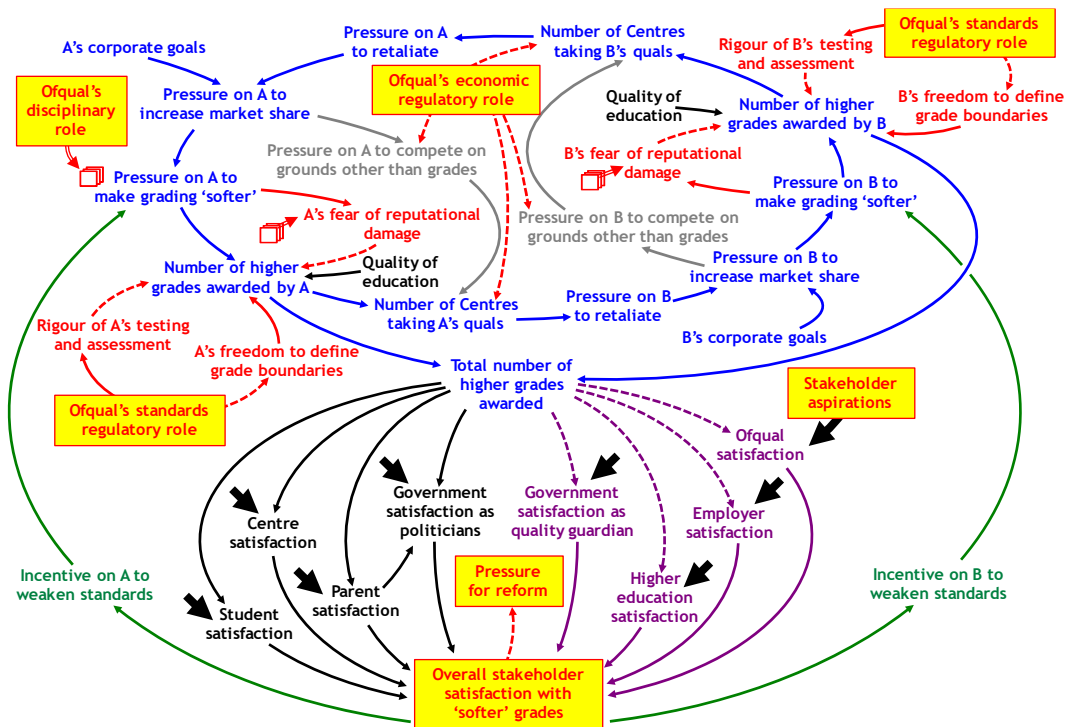


Figure 10

This last diagram is enough to give anyone a headache, but the educational systems are not trivial, so any way of capturing their essence is likely to demand some attention. As a regulator of standards, Ofqual limits the freedom of an awarding organisation's to define grade boundaries, and can, and must, enforce rigour, and integrity, on the processes used by all awarding organisations for testing and assessment. As an economic regulator, Ofqual defines the rules of competition; and in its disciplinary role, Ofqual can levy fines - or, perhaps more powerfully, threaten to levy fines - to the detriment of an awarding organisation's reputation. All of these actions drive standards back up, stopping, and indeed reversing, the 'race to the bottom' - as the experience of the last few years demonstrates.

Most importantly, Figure 10 shows that the *nature of the system itself will drive grade inflation, fuelling a rather slow, but nonetheless relentless, 'race to the bottom', unless an outside regulator - and a regulator with teeth - exerts pressure to uphold, and enhance, standards.* Until, that is, a wider coalition of awarding organisations, Centres, students, parents, politicians, government officials, academics and employers sincerely agree that, for the sake of society as a whole, robust, high educational standards are a 'good thing' - at which time the external regulator just needs to keep a close eye. But until then, it needs to wield a big stick.