

**Questioning and Bridging Across Claims to Generate New Ideas:
The Theory and Practice of Generating Reasoning Through
Integrative Moves**

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Questioning Claims to Generate New Ideas

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Introduction

Since the Irish potato famine in the 1840's, Irish men and women had immigrated to England in great numbers and formed the backbone of the construction and service industries there. In 1986, the return Dublin-London air fare was £200 (about \$850 in 2007 Canadian funds), well beyond the means of many emigrants. There was one alternative: to travel by car and ferry, which was much cheaper but could take as much as a full day of traveling. For a large number of Irish emigrants, neither alternative was satisfactory.

The fledgling Irish airline, Ryanair¹, challenges this tradeoff by offering Irish emigrants and their families the convenience of flying at a price competitive with overland travel. Today, Ryanair flies throughout Europe and is renowned for its rock-bottom fares - as low as £5 on many of its routes.

The essence of Integrative Thinking in business is to develop new perspectives about an industry, a market or a managerial dilemma. To develop new perspectives, however, we need to understand, appreciate and place existing perspectives in appropriate context. Integrative Thinking provides a set of tools

¹ See also Dunne, David, "Flying High at Ryanair", in Hitt, Reland, Hoskisson, Sheppard, Rowe (2009) *Strategic Management: Competitiveness & Globalization Cases*, 3rd Canadian Ed.: Nelson.

for both understanding and bridging across radically different perspectives, in order to transform ‘either/or’ decisions into genuinely better ‘third ways’. In this paper we explore a methodology for developing new perspectives by thoroughly questioning existing ones.

Because Ryanair’s founder, Tony Ryan, had worked in the airline industry for many years, first with the Irish airline Aer Lingus and later as an aircraft “broker” matching buyers with sellers, he understood the industry intimately. But he, and his partner Michael O’Leary, also could see a way of avoiding the unacceptable tradeoff of travel that was either too expensive or too time-consuming: to build an airline based on a low-cost business model. Ryanair’s strategy was predicated on turning the ‘which?’ question into the ‘how?’ question, thus transforming a choice problem into a design problem.

By using secondary airports close to major European cities, Ryanair could negotiate much lower landing fees than existing airlines. By flying only point-to-point - no passenger transfers - aircraft could be turned around more quickly with fewer costly delays. By using only one type of aircraft, the Boeing 737, training and maintenance costs were reduced. By selling tickets directly to passengers, agents’ commissions were eliminated. And by shaving every aspect of its internal operations, operating costs were pared to the minimum.

With the success of Ryanair, a third way to travel between Britain and Ireland was established. The airline industry itself has now divided into two business models: the “full service” model offered by legacy carriers like British Airways and Air Canada; and the “discount” model of Ryanair and others. While the boundary between the two models is not always sharply defined, legacy carriers tend to operate via major “hub” airports and offer passenger comforts and connections to other flights, and discount carriers approximate the stripped-down Ryanair approach.

Mental Models

A mental model is a representation of a situation that encapsulates our view of it and frames our thinking, perceiving and acting. As an example, the phrase “business is war” represents a mental model: it implies that we see business as riddled with conflict, and suggests that we would regard moves against us by competitors as primarily a threat, competitors as opponents or enemies, managers as officers, employees as foot soldiers, customers and their budgets as the contested terrain, and strategies as battlefield tactics. It goes hand in hand, therefore, with mental models such as ‘the organization is an army’ and ‘the employment relationship is a chain of command’. An alternative model might be “business is an art” and we would expect quite a different set of attitudes to be associated with this: in this model, we might see competitive moves as an inspiration to new creative work. (Neither model is right or wrong; they simply represent different perspectives *within* which claims can be judged

to be right or wrong: 'Question your superior's orders' is normatively 'wrong' in the 'organization is an army' model, but may add significant value in the 'business as art' mental model).

Business models are not to be confused with mental models. A business model is the way a business operates to take advantage of patterns in its environment: Dell's business model, for example, of manufacturing to order is very different from Apple's standardized model. However, the mental models of management, and their willingness to challenge existing mental models, embed the business models, which, in turn, arise from existing mental models. A 'hardball' business model based on predatory pricing, raiding competitors' talent pool and negative advertising that stresses the disadvantages of the competitors' products, for instance, is obviously consistent with a 'business is war' mental model.

Integrative Thinking helps build business models by re-engineering and re-crafting mental models. Ryan and O'Leary refused to accept, as others had for decades, the mental model that there was a necessary tradeoff between high fares and long travel time between Dublin and London. And the next integrative thinker in the airline industry might refuse to accept the prevailing mental model that legacy carriers cannot match the low costs of discount airlines, or that discount airlines cannot offer outstanding service to passengers.

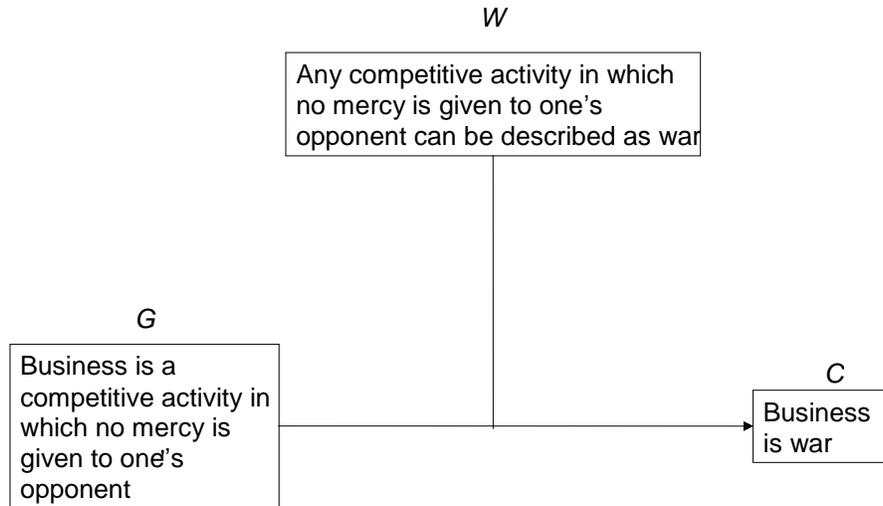
Deconstructing Mental Models

It was no accident that Ryan had been an airline executive for many years, first with Aer Lingus, then with his own company, Guinness Peat Aviation, before he launched Ryanair. His years in the industry gave him a thorough familiarity with the dominant mental model. The first prerequisite to developing a new model is to understand the existing one: not just to acknowledge that it exists, but to fully appreciate its underpinnings. We can use the Logical Argument Map from Foundations of Integrative Thinking² to enrich our understanding of mental models and the arguments that support them.

For example, to understand the model “business is war” we would need to know not just that some people believe this, but *why* they believe it. The *claim* (*C*) that business is war is based on certain *grounds* (*G*): for example, that business is war: a competitive activity in which no mercy is given to one’s opponent. This is *warranted* (*W*) by an assertion that any competitive activity in which no mercy is given can be described as war, as show in Figure 1:

² Also Toulmin, Rieke and Janik (1984) *An Introduction to Reasoning*, 2nd Ed. New York: MacMillan

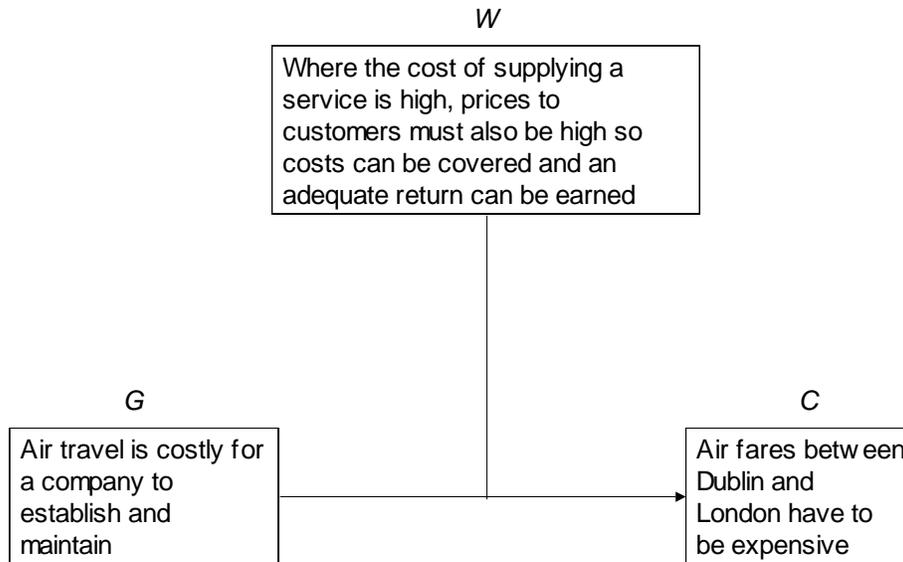
Figure 1



Right away we can see that the claim is flawed, at least if taken literally. Unless we can use the warrant that any such competitive activity *is* war, then all we have is a metaphor, by which we really mean “business can be described as war”. As a counter-example, Olympic sports are competitive, but certainly not merciless.

Similarly, the argument underlying Dublin-London air travel up to the 1980's might have been something like that shown in Figure 2:

Figure 2



This is a seductive argument, but as we saw earlier, Ryan and O’Leary challenged it by questioning its grounds that air travel must have a particular cost structure. But one only has to look at industries with very low margins (such as grocery retailing and dairy) to see that the warrants to this argument can be challenged too. High costs do *not* necessarily mean high prices: if the customer base is big enough, you can have the slimmest of margins and still earn high returns. Ryanair showed that this low-margin-high-volume model could apply in the airline industry as in retailing³.

To develop a new model, however, we often have to do more than question one existing model: usually, there are several different mental models and an

³ As it happens, Michael O’Leary was a retail entrepreneur before joining Ryanair.

integrative thinker understands *all* of them, while developing a new, better model. In the following sections, we will suggest a process for deeply understanding existing models, testing them for validity, and developing new models that keep the best aspects of existing models but discard their worst aspects.

Phase 1. Understanding Arguments

To understand an argument, we need to be clear on exactly what is being claimed, on what grounds and according to what warrants. We need to appreciate and be able to restate the argument to the satisfaction of its proponent.

We begin by understanding the *claim* itself, asking ourselves the following:

- a. What is being claimed?
- b. What is the scope of the claim? What are its boundaries?
- c. Why is it expressed in this way?

To develop satisfactory answers to these questions, we ask questions of the proponent. Our purpose here is not (yet) to challenge the claim, just to understand it.

Suppose that the claim is that “air fares between Dublin and London have to be expensive”. We might ask what “expensive” means, whether the proponent is claiming that they have to be expensive at all times of year, or only at peak periods, and why the claim is just about air fares and not travel costs in general.

Once we believe we understand the claim, it is useful to check in with the proponent, by *paraphrasing* the argument: repeating the claim *in our own words*, and asking: “Have I got it? Have I left anything out?” and adjusting our restatement of the claim according to the response.

Grounds are the facts that support the claim. To understand the grounds, we ask information questions, precision questions and salience questions, as follows:

- d. Information Questions: How, What, Where, When?
- e. Precision Questions: 'What exactly?', or 'How much?', or 'Always?'
- f. Salience Questions: Which facts are most salient (to the claim)?

For the grounds that “air travel is costly for a company to establish and maintain” we might ask what are the major sources of cost, how costs are related to volume (fixed/variable/mixed) and whether there are economies of scale or scope. We could ask for specifics in the form of income statements or

balance sheets, and we could ask whether the costs of setting up an airline or those of running it are more critical to the claim that air travel between Dublin and London has to be expensive. Is air travel expensive primarily because of the acquisition cost of new aircraft? The cost of monitoring passenger bookings? And so on.

Warrants are statements that connect the grounds to the claim. In the case of warrants, we need to understand the links between concepts: internal links within the warrants themselves, and the role the warrants play in linking grounds to the claim:

- g. Clarification Questions: What do you mean by (word or phrase)?
- h. Causality Questions: Why are (grounds) important in this case?
- i. Backing Questions: Why do (warrants) hold? What is the backing?

For the warrant “where the cost of supplying a service is high, prices to customers must also be high so costs can be covered and an adequate return can be earned”, we need to understand the link between high costs and high prices. To develop a clearer understanding of the warrant, we might ask what it means to “cover costs”, or what constitutes an adequate return. For Causality, we could ask how high costs “cause” high prices - what role airline costs play in price setting, or how airlines set prices generally. This might take

us to look at the competitive structure of the industry, at the relationship between ticket prices and overall demand for air travel, and so forth.

Backing is the set of statements that underlie the warrants, their justification from a more general perspective. In this case, we might want to establish why it is that high costs result in high prices, and we might ask what the relationship is between costs and prices in general, not just in the airline business.

The answers to these questions about claims, grounds and warrants can reveal potential new models. Ryan and O’Leary might not have questioned the warrant that high costs imply high prices, but would probably have questioned the grounds that airline costs are high. To do so, they would have to appreciate why costs are considered high by understanding their underlying components and behaviour⁴.

At this stage, however, all we are interested in is understanding the argument: we can note down any ideas we have and use them later.

Phase 2. Synthesis

Before proceeding any further, we need to confirm that our overall understanding of the argument is correct. So we repeat the step we took

⁴ Between them, they had ideal skills for this: Ryan had a long history in the airline business and O’Leary had a background in accounting.

earlier after asking questions about the claim: check in with the proponent to see if we understand, the claim, its grounds, warrants and backing. As before, we can restate the argument in our own words, preceded by a phrase like, “so, as I understand it, you are saying that ...” and we ask, “Have I got it? Have I left anything out?” and modify our interpretation of the claim as appropriate.

Phase 3. Testing: Integrative Moves 1 and 2

Now that we understand the argument, we can consider whether there may be other ways of looking at the situation. We can do this by using one of several *Integrative Moves*. Before applying the first Integrative Move, we ask some basic questions about the claim, grounds and warrants and the relationship between them:

- j. Veracity questions: Are the grounds *true*? What is the evidence?
- k. Relevance questions: Are the warrants *relevant*: do they connect the grounds to the claim? Is the backing adequate?
- l. Qualification questions: Are you making this claim unconditionally and without qualification? Are you saying that it’s certainly and necessarily so, or that it’s probably, very likely, or quite possibly the case?

From our earlier questioning, we need to consider whether the grounds that “air travel is costly for a company to establish and maintain”, are true, false or

partly true. But we are interested in more than just proving or disproving the claim by evaluating its grounds: partly true grounds are perhaps the most interesting, since they reveal nuances that may be useful in generating a new model. So understanding which parts of air travel are cost drivers would be important: for example, the realization that landing fees were an important cost driver led Ryanair to use of secondary airports and negotiate lower fees.

We also need to question the *relevance* of the warrants to this case. Of course the warrant will not be relevant if the grounds are false: i.e. if air travel is not costly, it does not matter whether costly services demand higher prices. However, the warrant may also be irrelevant even if the grounds are true, so we might argue that the general rules about the price-cost relationship for services do not apply to airlines, (notionally, at least) because costs are less of a factor in airline pricing than in that of other services. Or if the warrants are partially relevant, we will again be interested in the nuances revealed by the discussion.

Every argument has a *degree of strength* and we need to find out whether the claim is *qualified* in any way. Words like “certainly”, “necessarily”, “always” indicate the claim is unqualified: there are no conditions in which it does not hold, which is a very strong condition indeed. Words like “presumably”, “in all probability”, “so far as we know” are qualifications that indicate that the claim is conditional. We need to determine what those conditions are.

We can now derive our first two Integrative Moves in the form of questions that help deepen our understanding of the argument and help us generate a new argument. Integrative Move 1 (IM 1) explores the “boundary conditions” for the claim, while Integrative Move 2 (IM 2) seeks to improve our understanding of the underlying premises and relationships that support the claim:

- m. *IM 1*: Under what conditions does the claim hold? Under what conditions would it not hold?
- n. *IM2*: By what mechanism does the claim hold?

Michael O’Leary might have applied Integrative Move 1 by asking why charter airlines could offer cheaper fares than scheduled airlines. In doing so, he could explore which aspects of airline costs could be avoided or reduced, and which were unavoidable. Had he done so, he might have found that charter airlines had low landing fees because they used smaller airports - a useful piece of information for a discount airline.

He might have delved deeper with Integrative Move 2, by asking what factors airlines take into account when they set prices, and how these decisions are made. He might have found, for example, that airlines based their fares on average costs rather than marginal costs. Airlines set prices based on date of

booking and he might have explored the origins and implications of this practice.

Phase 4. Repeat for Counter-Claims

This form of questioning and analysis is repeated for each counter-claim; as we go through the process, we enrich our understanding of the situation and develop ideas for new or modified arguments. These ideas should be noted and put aside until we have explored all claims.

The biggest challenge in this process, but nevertheless an important step, is subjecting *our own claims* to this type of questioning. To do this, we need to learn to step back from our dearly-held beliefs; it can be helpful to enlist the help of a trusted colleague who will act as questioner and help us hold our own claims up to the light.

Phase 5. Generate an Integrative Model

Armed with an in-depth understanding of the situation, we can generate a new model that builds on the most interesting aspects of the existing models. We ask the following questions:

- o. What other claims can we think of? What other facts (grounds) might be relevant?
- p. What is interesting about (claim 1)? (claim 2)?

We can also apply Integrative Move 3, a move designed to broaden our thinking about the possibilities arising from the grounds and warrants.

q. **IM 3:** What other claims might be supported by these warrants/grounds?

Other claims can be generated using a table like Table 1:

Table 1

Claim Summary Table

Claim	Grounds	Warrants
1.	1. 2.	1. 2.
2.		
3.		

This is a “structured brainstorming” exercise and conforms to the usual brainstorming practices: generate many ideas first and winnow them down later; do not criticize others’ ideas; take risks and build on each others’ ideas. Unlike standard brainstorming, however, in this exercise we explore the ideas in more depth by stating the grounds and warrants for each claim.

The starting point may be a new claim, in which case we would ask, “What facts support this? Why do they support it?” Or it may be an interesting fact that could become the grounds for a new claim. In either case, our objective is to arrive at a relatively complete statement of the argument, without actually confirming or dismissing it; evaluation of ideas is done later, using the steps outlined above.

We explicitly examine the existing claims, and their grounds and warrants, in depth. We look for aspects of each claim that hold potential for the generation of future claims. In the airline case, for example, the warrant emphasizes the importance of covering costs; we might ask how costs might be covered through means other than high fares. Ryanair, for example, earns a great deal of its revenue through on-board sales and advertising; O’Leary has suggested that in the future, airlines could rely on ancillary revenue sources such as these and actually eliminate traditional fares.

Using Integrative Move 3, we can use the grounds or warrants associated with existing claims to support other claims - the facts are the same, but we could draw different conclusions from them. The high operating costs of airlines might, for example, support a claim that it would be difficult for an established airline to compete with a new airline that has a lower cost structure (as indeed things actually turned out).

The output of this process is a new set of arguments - claims, grounds and warrants - that provide fresh perspectives on the situation. However, these new arguments need to be evaluated, and our next step is all about testing them as we have tested the existing claims.

Phase 6. Test the Integrative Model

The acid test of our integrative model is to look at its implications. When the US invaded Iraq in 2003, its actions were based on a claim that its Saddam Hussein had developed nuclear and other weapons of mass destruction (WMD's), justified by information obtained from intelligence sources. In early 2003, then Secretary of State Colin Powell addressed the UN Security Council using a range of evidence that included recorded phone conversations, aerial photographs and Iraq's record to support an argument that Iraq had developed WMD's and was trying to deceive the international community. The arguments made in this speech became the foundation of the invasion of Iraq a few weeks later. As subsequent events showed, however, the claim that Iraq had weapons of mass destruction was false.

Integrative Move 4 acknowledges the possibility that a claim may be false, and asks what alternative claims might be true instead:

- r. **IM 4:** What would be true if our claims were false?

In the case of Secretary Powell's address, acknowledging that Iraq might not have had weapons of mass destruction would open us up to different ways of interpreting the grounds presented: aerial photos of alleged weapons facilities might have been manufacturing facilities, and apparently suspicious phone conversations might have been innocent. These same facts could also have supported a claim that Saddam Hussein was indeed deliberately trying to deceive the international community, not because he had access to WMD's but in order to deter an invasion (see Integrative Move 3).

Similarly, acknowledging the possibility that air travel need not be expensive could have opened up new ways of thinking, and in effect this is what Michael O'Leary did. The grounds of high costs of service delivery might alternatively have supported a model in which specific costs are "shared" between the airline and those passengers who incur them. The costs of installing and maintaining on-board entertainment systems, for example, might be defrayed by a charge for these services. Or those who add weight to the aircraft (and therefore fuel costs, wear and tear costs, baggage handling costs, etc.) by checking more bags might be asked to pay for each bag checked.

Charges such as these are familiar in the airline industry today. But in the mid-1980's they were unheard of, as was the mental model that air travel did not have to be expensive. It took integrative thinking to question the assumptions underlying this mental model, and to propose an alternative way of thinking.

Conclusion

Today's conventional wisdom about the airline industry is that it is divided into two strategic groups: legacy airlines and discount airlines. Will the industry generate a new model? The distinction between these two groups is already blurring, and it remains to be seen whether a new *business* model will be generated. For this to happen, existing *mental* models need to be made explicit, questioned, mutually confronted, and integrated.