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Tricks and Clicks: How Low-Cost Carriers Ply their Trade through Self-Service Websites

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Abstract Ethics on the Internet has been a widely debated topic in recent years covering issues that range from privacy to security to fraud. Little, however, has been written on more subtle ethical questions, such as the exploitation of web technologies to inhibit or avoid customer service. Increasingly some firms are using websites to create distance between them and their customer base in specific areas of their operations, while simultaneously developing excellence in sales transaction committal via self-service. This chapter takes a magnifying glass with an ethical lens to one sector – the low-cost, web-based, self-service airline industry, specifically in Ireland. It is noted that the teaching of information systems development (ISD) and, for the most part its practice, assumes ethicality. Similarly, marketing courses focus on satisfying customer needs more effectively and efficiently within the confines of an acceptable ethos. This chapter observes that while these business disciplines are central to the success of self-service websites, there is a disconnect between the normative view and the actuality of practice.

1 The Success of Low-Cost Carriers (LCCs)

Historically, legacy airlines were noted for offering a premium service, and through the protection of government regulation, cartels of these established airlines flourished and easily drove out competition (de Neufville 2006). The advent of economic deregulation of the US airline industry in 1978 followed by the United Kingdom (1987), Canada (1988), Australia (1990), the European Union (1992) and Japan (2000) meant legacy airlines had to consider carefully their cost of operations. The most important consequences associated with the progressive deregulation of markets are lower fares and higher productivity (Kahn 2002). Al-

Chris Barry and Ann M. Torres

though the average yields per passenger mile (i.e. the average of the fares that passengers actually paid) were falling prior to deregulation, between 1976 and 1990, average yields declined 30% in real, inflation-adjusted terms, which translated into an estimated savings to travellers of \$5 to \$10 billion per year (Kahn 2002). Deregulation also fostered higher levels of productivity by removing the airlines' restriction on pricing and destinations. Without these restrictions, intense price competition ensued, which spurred airlines to seek improvements in efficiency (Kahn 2002).

The low-cost operation has been a highly successful model in the airline industry over the last decade (Alamdari and Fagan 2005). In Europe, LCCs are growing 20% to 40% annually (Alamdari et al. 2005) and currently hold 33% of the overall market (de Neufville 2006). Although there are variations in strategy among carriers, the basic LCC model is to achieve cost leadership to allow for flexibility in pricing and achieve higher operating margins. Typically, this strategy requires the carrier to examine every function and service they perform and either to eliminate those considered as superfluous frills or to charge for them separately as an addition to the basic fare. The sophisticated information systems (IS) LCCs employ for dynamic pricing and revenue management have contributed substantially to their healthy profit margins. However, in their focused pursuit to eliminate frills, customer service is one function that appears to have declined in importance. Among some LCCs, the justification given for neglecting meaningful customer service (such as managing complaints and concerns) are the low air fares they offer customers (Alamdari et al. 2005; de Neufville, 2006).

2 Ideals for IS Developers and Marketers

Information systems have for many years been developed and implemented using structured or object-oriented methods. Both methods are based on a systems development life cycle that contains a number of stages, checkpoints and tasks. Information systems development involves systems analysis, systems design, construction and implementation as major stages that are facilitated with a range of techniques from process modelling to data modelling to object-oriented modelling (Constantine and Yourdon 1979; DeMarco 1979; Martin and Finkelstein 1981; OMG 1998). The critical importance of the user and their interaction with the computer system has been recognised and great effort has been expended to ensure the experience is engaging and productive. This area, known as human computer interaction (HCI), has a long held goal to improve the interaction between users and computer systems by making systems more usable and amenable to the users' needs.

The fields of ISD and HCI are taught to students with the aid of popular texts on virtually every IS/IT college programme with a universal supposition that a central objective of systems development is to maximise usability and deliver a satisfying user experience (Shneiderman 1998). An examination of widely used texts on the principles of web design (Nielsen 1999; Krug 2000; Nielsen and Tahir 2001; Sklar 2006) supports the hypothesis that IS professionals adopt a benign and moral posture in designing and developing IS. No advice or guidance was discovered that there exist design strategies or instructions that set out to inhibit customer response or impede interaction. The authors would argue that amongst some practitioners, the supposition that they adopt a considerate and user-centred approach is no longer a central tenet.

The essential premise of marketing is to develop ways to satisfy customer needs and wants more effectively and efficiently than the competition, as a means to achieving organizational success (Kotler and Levy 1969; Hunt 1976; Houston 1986; Trustrum 1989). This marketing management philosophy, also known as the marketing concept, clearly distinguishes between those firms which merely have forms of marketing, such as the presence of a marketing or customer service department, from those firms which are market-focused and customer-driven in implementing their strategies. Firms successfully employing the marketing concept pursue a delicate balance between satisfying customers' needs by creating more value, while simultaneously achieving organizational objectives by accruing profits.

An effective interaction between a buyer and seller may result in a satisfied customer, but to retain customers over the long-term means managing customer relationships consistently. In today's technology rich environment, marketers facilitate their individual interactions with customers through customer relationship management (CRM) processes (Payne and Frow 2005; Jayachandran, Sharma, Kaufman and Raman 2005; Srinivasan and Moorman 2005). Other terms for CRM are relationship marketing, real-time marketing, and customer intimacy; all of these terms reflect CRM's strategic intent – focusing on satisfying individual customers meaningfully as well as profitably for the firm (Wagner and Zubey 2007; Antón, Camarero, and Carrero 2007). Through the systematic combination of people, process and technology, CRM techniques facilitate in enabling firms to acquire and retain customers. Finding and acquiring customers costs firms money, but retaining existing customers is substantially more profitable than seeking fresh customers for new transactions. On average, the cost of acquiring new customers is five times more than servicing existing customers (Keaveney 1995). Furthermore, the marginal cost of servicing existing clients declines over time, whereas the cost of attracting new customers typically increases over time.

In CRM *meaningfully satisfying customers* refers to facilitating the full spectrum of customer interactions, including complaints and concerns. Marketers view customer complaints as opportunities for service recovery that can turn angry, disgruntled customers into loyal, vocal advocates for the firm. Indeed, good service

Chris Barry and Ann M. Torres

recovery typically translates into higher sales than if all had gone well in the first place (Smith, Bolton and Wagner 1999). Poor service recovery is an indication that a firm lacks commitment and diligence, which along with trust and earned reputation, are indispensable to establishing enduring relationships in service and dot-com businesses (Murphy, Laczniak and Wood 2007). Ultimately, service failures and poor service recovery translate into lost customers that migrate, often permanently, to competing firms (Keaveney 1995). Because many firms handle customer complaints poorly, those firms that do succeed in offering excellent service recovery may secure an unrivalled source of competitive advantage (Antón et al. 2007).

3 Gummy Practices and Social Responsibility

LCCs offer value to customers through their low fares, and achieve profits by calibrating costs carefully to achieve attractive margins. However, a number of LCC use their information systems in a conflicting manner when managing customer interactions. The websites for these LCCs smoothly engage and facilitate customers through the self-service process to commit users to purchase tickets and ancillary products, such as insurance, accommodation, and car rental. However, once users move beyond the *committal* point (when they have chosen where and when they wish to travel and received an initial quote) the websites appear *gummy*. It becomes problematic in navigating towards a *real* final price, necessitating the users to side-step a series of options. Moreover, the websites seem awkward, sluggish and opaque in facilitating customer complaints and concerns, and make it challenging for the users to contact the airlines. These difficulties and omissions are contrary to the ethos of designing a *good system* to facilitate the full spectrum of customer service.

Increasingly, social responsibility is viewed not just as a good idea, but rather as good business practice, which increases efficiency and ultimately translates into positive financial performance. A recent study conducted by the investment bank Goldman Sachs (Rominger 2007) found socially responsible firms out-performed a global stock index by 25%, indicating a positive correlation between social responsibility and earnings. Consequently, socially responsible investing (SRI), also known as environmental, social and governance (ESG), is gaining in momentum (Cohen 2006). Investors are seeking firms, which express core values beyond financial objectives, such as environmental responsibility, fair employment practices, and robust corporate governance that incorporate codes of conduct that espouse principles of transparency, integrity and ethical behaviour.

A key question is to what extent could gummy practices be considered unethical and thus indicative of a firm's diminished social responsibility? In employ-

ing gummy practices in their websites, it could reasonably be suggested LCCs are displaying a conflict in values, where the pursuit of strong institutional performance conflicts with addressing meaningful customer complaints and concerns in a transparent and responsive manner. At its most basic level, ethics are meant to “support justice, rights, and duties. [One wants] others to keep their promises and agreements, to obey the law and to fulfill their duties” (Tavani 2007, p. 64). Thus, if an airline carrier fails to provide a reliable and transparent service by knowingly designing gummy features into their websites, in the absence of contravening considerations, it is acting unethically.

Certain gummy features may not be accidental in design, but neither are they grossly offensive or subject to serious regulatory sanctions - yet. Ireland’s National Consumer Agency (NCA) requires firms trading online to comply with the EC Distance Communication Regulations, 2001 and the European Communities E-Commerce Regulations, 2000. The NCA states “web traders are required under both sets of regulations to provide certain information to the consumer prior to an order being placed. The on-site requirements include information on the geographical address of the retailer, how the consumer may correct errors while making an order, the tax inclusive price of the product, arrangements for payment and delivery, the right to cancel the order, etc.” (ODCA 2006, p. 13). However, many LCCs operating out of Ireland do not comply substantially with these requirements, in particular the requirement for displaying a tax inclusive price. For example, while Aer Lingus displays air fares inclusive of taxes and charges on the website homepage for Germany, Netherlands, Portugal, Spain and Switzerland, for the other nineteen countries in which Aer Lingus operates (including Ireland), the air fares displayed on the homepage do not include taxes and charges.

Other jurisdictions are beginning to regulate as well. The UK’s Office of Fair Trading (OFT) threatened to take legal action against airlines in an attempt to tackle misleading pricing practices. In February 2007, the OFT gave airline “carriers and travel agencies three months to include all fixed non-optional costs, [such as fuel charges and passenger taxes] in their basic advertised prices” throughout all media, including websites (BBC News 2007). In response to the OFT, Easyjet promised by the end of the summer that all prices on its website would include taxes and charges, while Ryanair claims to have changed the prices on the homepage for its UK website and would include all extra costs on the rest of the site by the end of the year (BBC News 2007).

4 Research Approach: Heuristic Evaluation

The purpose of this study is to assess the proposition that certain features of low cost carriers (LCCs) websites are gummy by assessing their usability. In this case

the key interaction issues in question are navigation, achieving functionality, consistency, ease of effort and being able to communicate with web-based operators who primarily have an online rather than a high-street presence. A study was conducted to evaluate the usability and functional design of four LCC websites operating out of the Republic of Ireland: Aer Arann, Aer Lingus, bmibaby and Ryanair. The methodology was based on heuristic evaluation, which is well established within the HCI field. It is a usability inspection technique that systematically assesses a user interface design for usability (Nielsen 1994). Heuristic evaluation is guided by recognized usability principles (i.e. heuristics) that examine if interface elements conform in practice to those principles. They were empirically compiled from an analysis of a large number of usability issues and were customized to consider web-specific problems (Sharp, Rogers and Preece 2007) for the low-cost airline industry - based partly on Nielsen's set and the authors' knowledge of relevant issues, as well as ethical problems emerging from the sector (Alter 2003; Clark 2006; ECC Network 2006). The study involved using a group of six usability experts to evaluate the interfaces and judge their compliance with usability principles. The work goes beyond the assessment of the *goodness* or otherwise of usability and makes judgements on the concordance of website features with broader expectations of IS design and marketing principles. The heuristics and the guidelines for evaluating them are shown in Table 2. To gauge the effectiveness of each of the LCC websites, the heuristics were evaluated against typical functionality users would expect to use as part of an online, self-service website (see Table 1). They constitute representative pre-sale, sale and post-sale functionality.

Table 1. Analysis of Functionality

<p>Functionality: Finding and booking flights.</p> <p><i>Sub-function 1:</i> You have decided on a brief holiday return trip in August to anywhere in Europe. You have some flexibility on dates (get as far as the final screen at credit card entry.)</p> <p><i>Sub-function 2:</i> You want to identify a cheap flight later this year since you are on a very tight budget. You are very flexible on dates and destination. You just want details to discuss it with your friend or partner.</p>
<p>Functionality: Contacting the airline.</p> <p><i>Sub-function 1:</i> Find and establish the nature of contacting the airline (For example: How can the LCC be contacted? What is the nature of customer feedback details?)</p> <p><i>Sub-function 2:</i> You had an unpleasant experience with an airline and wish to report it to them (For example: on-board toilet hygiene on a recent flight was very poor or you received a very unsatisfactory response from cabin staff.)</p>

Table 2. Evaluation Heuristics

Heuristic	Description
Aesthetic and minimalist design	The website should not contain unnecessary or rarely needed clutter.
Navigation design	The means by which users navigate their way around the information structure should be clear.
Internal consistency	Users should not have to ponder whether different terms or actions have the same meaning. The language should be that of the user where possible and information should appear in a natural and logical order.
Depth of navigation menu	The website should be designed so that it is shallow rather than deep.
Completion of tasks	The system should be designed so that users are able to efficiently and effectively complete a task to their expectations. Are there features that accelerate functionality for expert users while remaining flexible enough for novice users?
Clarity of feature functionality	A feature should fulfil the function implied by the dialog. Dialog should be simple with no irrelevant or unnecessary information.
Minimizing the user's memory load	The interface should not require users to remember information between one part of the system and the next.
Help users recognize, diagnose and recover from errors or unintended actions	Careful design that prevents a problem from ever happening is better than good error or warning messages.

5 Analysis of the Heuristic Evaluations

The analysis is presented on the basis of each aspect of functionality that was evaluated by the experts. Evaluations were comprehensive and extensive, and the presentation below represents a distillation in general and the highlighting of features that are of particular interest.

5.1 Booking Flights

5.1.1 Destinations

One of the main functions a LCC website needs to facilitate is providing a quote for a specified flight and leading the user through to sales completion. Where the user begins the process of identifying the destinations the carrier serves, all of the LCCs afford advanced design features such as *hub and spoke* route maps that superbly assist users in visualizing what would otherwise be complex flat information. What is also interesting is that each airline made it easy to find the map and used consistent language; the button was called either *Where We Fly* or *Destinations*. Fig. 1 illustrates the similarity of this feature in each LCC's website. It demonstrates how an industry can gravitate toward conformity when a product feature is deemed to be of high quality and preferred by customers.

Fig. 1. Hub and Spoke Route Maps



5.1.2 Initial Pricing of Flights

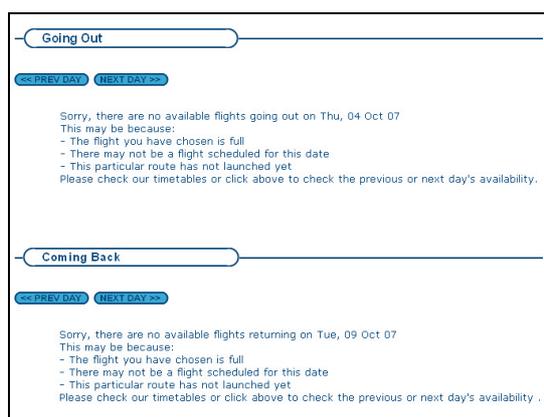
Pricing is achieved by using the booking systems of all airlines, rather than a separate quote facility. For this purpose, the LCC websites afford a high level of usability, assisting the user to complete the activity effectively. Initial price completion is achieved quickly and with a minimum of effort. There are many design features that accelerate the process, from giving users available flights around the preferred date to retaining user details during an interaction. All airlines use ex-

traordinarily similar features and functionality for pricing flights. For example: list boxes for *from* and *to* airports, date selection using list boxes and calendars, choosing the number of passengers, and *Return/One Way* choice are all presented in a similar manner. The depth of navigation is low for all LCCs, reducing the memory load and achieving rapid completion of tasks. The list boxes do not, however, operate in identical ways. Some features that are of the highest standard warrant special mention:

- The visibility of systems status for Aer Lingus is excellent, achieved by using breadcrumb-like indicators.
- Aer Lingus allows a user with flexible dates to play with all available flights for a two week period at a glance around the preferred date. The flights, all priced, can be seen for outbound and inbound flight segments on consecutive screens.
- Regarding flexible dates of travel, bmibaby go one step further by showing the information on just one screen and providing clearly visible tabs to display the option of a 3 or 7 day view around the preferred date, whilst still highlighting that date.
- Internal consistency for this functionality was excellent for Aer Lingus, bmibaby and Ryanair.

A number of features on Aer Arann's website were identified by experts as problematic, but were not a major hindrance to the essential task of completing a quote. Since the airline is small compared to others, many flights are not daily. Thus, where a user selects a flight on days for which there is none, a variety of explanations are proffered (see Fig. 2). They have chosen to supply *Prev Day* and *Next Day* buttons for users to manually find the closest available flights instead of finding them on their behalf. Ryanair use a similar design feature but because of flight frequency.

Fig. 2. Aer Arann's Screen on Unavailable Flights



Chris Barry and Ann M. Torres

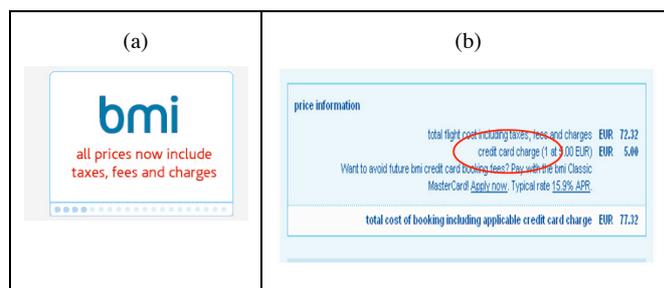
Another problematic feature on Aer Arann’s website is that some important links, such as *Terms & Conditions*, *Baggage Policy*, *Id Policy* and *Passenger Liability* are at the bottom of the page, almost out of sight. Being unable to get back to the homepage was another common problem experienced by experts and was considered a hindrance to usability on their website.

While the problems identified above did not impinge on users’ quickly getting an initial price quote, far more serious problems emerged when experts sought to conclude transactions. These problems are discussed in the following sections.

5.1.3 Getting to a Final Price: Handling Fees, Taxes and Charges

Apart from entering personal information required to complete a transaction, the main difference between pricing a flight and booking a flight is navigating the imposition of additional charges and negotiating a series of opt-in and opt-out services. All LCCs play with the currency of language in respect of what constitutes a quoted price and other charges. Many of these charges are unavoidable and revealed progressively as the user completes the transaction. Hence, there is significant uncertainty as to what constitutes a *final price* due to baggage fees, taxes, and a plethora of *services* for which extra charges are levied. All airlines quote a price that suggests it is either *Final* or *Total* whereas, in fact, it is neither. Consequently, these design features with respect to reaching a final price adversely affect usability and trust. Some airlines are more transparent than others; bmibaby is the only airline that claims to include taxes and charges, but they appear high and are not broken down and explained to the user during the booking process. Nonetheless, despite repeating the claim on six consecutive screens that *all prices now include taxes, fees and charges*, at the final screen bmibaby apply a charge of €5 for credit card payment (see Figs. 3(a) and 3(b)).

Figs. 3(a) and (b). bmibaby’s Taxes and Charges



The language that is used to describe charges is quite inventive. LCCs describe unavoidable charges that most other sectors would consider a cost of doing business as, for example: taxes, charges, levies, fees, handling fees, airport

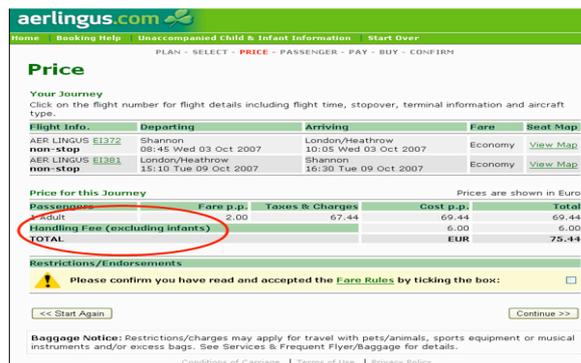
Tricks and Clicks: How Low-Cost Carriers Ply their Trade

charges and even *September 11th Security Fee for each enplanement at a U.S. airport*. The expressions used by particular LCCs to describe the final price of a flight (when it is not) are listed below:

- Aer Arann chooses to display flights quoting a *regular fare*, but upon flight selection, hefty *Taxes and Fees* are added that then make up the *Total Cost of Flight*.
- Aer Lingus, under *Booking Help*, explains what *Price* means by stating: “Price Total includes all relevant taxes and charges.” However, on the page after a flight is selected a *TOTAL* price is given that includes a specified *Handling Fee* for credit card processing. In this respect, it is reasonably visible.
- bmibaby, once a selection of flights appears for chosen dates, a message states (as noted above) the calculated price to be *total price now including taxes, fees and charges*, but neglects to mention handling charges, which are added later.
- Ryanair display available flight for each segment priced as *Reg fare*, which are then appended with *Taxes, Fees & Charges* to arrive at the *Total Cost of Flight*.

Aer Lingus and Aer Arann do not provide clear information on the nature of taxes and charges during the reservation process. As an illustration, Fig. 4 reveals how a €2.00 Aer Lingus return flight becomes €75.44 with the addition of taxes and charges. On top of the *Taxes and Charges*, there is a *Handling Fee* with the useful addendum that it is applied *excluding infants*. One might be forgiven for thinking that this might be a seat charge if an infant is carried on one’s lap, but how could Aer Lingus be charging €6.00 for the seat? Does it refer to a credit or debit card charge? The user is not informed and *Booking Help* sheds no light on the construction of these charges. But it does not end here: choosing to bring a piece of luggage costs €5.00 per segment. Users are also automatically charged €12.00 for travel insurance. If this is declined by opting-out, then the apparently nearly-free flights costing €2.00 becomes €85.44. While the final cost is still reasonable in this case, the user is left utterly misled about the real cost of the flight.

Fig. 4. Aer Lingus’s Taxes and Charges



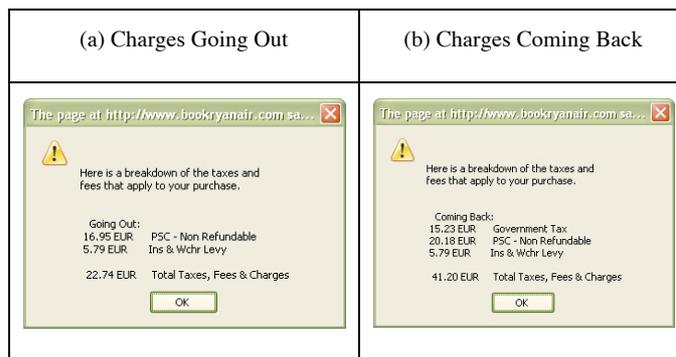
The screenshot shows the Aer Lingus website's 'Price' section. It displays flight details for a return journey from London to Shannon and back. The price breakdown table is as follows:

Passengers	Fare p.p.	Taxes & Charges	Cost p.p.	Total
Adult	2.00	67.44	69.44	69.44
Handling Fee (excluding infants)			6.00	6.00
TOTAL			EUR	75.44

Below the table, there is a section for 'Restrictions/Endorsements' with a warning icon and the text: 'Please confirm you have read and accepted the Fare Rules by ticking the box:'. There are buttons for '<< Start Again' and 'Continue >>'. At the bottom, there is a 'Baggage Notice' and links for 'Conditions of Carriage', 'Terms of Use', and 'Privacy Policy'.

To their credit, Ryanair have a clear message on the screen that displays the available flights for the chosen journey, informing users that "... unless you are taking advantage of one of our advertised flight offers, which are free of taxes and charges, the below flight costs do not include taxes and charges." No other airline is as explicit. bmibaby offer a *tiny tip* delivered by an angelic figure that first says: "fly cheaper" followed by a wholly opposite message of: "the total price per person includes taxes and charges and is shown at the bottom of the page." Ryanair also provides some degree of explanation of their charges. However, it is accessed via a *details* link that reveals a pop-up alert box displaying a partial explanation of charges as a graphics image rather than text, illustrated in Figs. 5(a) and 5(b). This last point is quite troubling; the design feature means a customer cannot print or even highlight and copy the charges. In effect, if one wishes to closely examine such charges one either reads them while the box is open or writes them down on paper. Can this feature be anything other than deliberate?

Figs. 5(a) and (b). Ryanair's Taxes and Charges

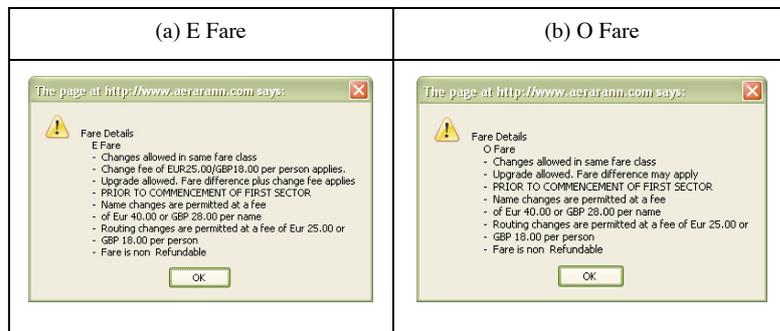


It is also worth noting the charges going out and coming back are, in this case, significantly different for each segment and little effort is made to explain the differential. To reveal, as far as is possible, what these charges are composed of, it is necessary to burrow deep into Ryanair's website. The strangest charge is the *Passenger Service Charge/Airport Tax* denoted *PSC* in Figs. 5(a) and (b), which is "a charge made by the airport authority to an airline for the use of the terminal, runway, emergency services, security facilities etc." One would speculate on the motives for publishing prices for flights that do not include the use of an airport terminal and other essential services for flight operations.

Similar to Ryanair, Aer Arann uses pop-up alert boxes to display different fare types denoted as *E, K, O, V, W* and so on. Figs. 6(a) and (b) demonstrate the incomprehensible nature of these fare types. The crammed information cannot be printed, copied or stored, and disappears when a user wants to check a different fare type. Spotting the differences between the various fares is not for the poor sighted, since they are extremely difficult to distinguish from each other. Indeed, in one interaction it was discovered the conditions for *E, S, T, V* and *W* fares were

exactly the same. Such a scenario makes it hard to square the phenomenon with one particular condition found to be common to all fares: “changes allowed in the same fare class”. Once a fare is selected the fare type conditions appear more clearly on the next screen, but a user would not know this in advance. Aer Arann’s logic for designing such a wholly confusing mechanism for communicating the fare conditions to users is difficult to understand. The evaluation found no explanation on the website of what differentiates these fare types. Such lack of clarity in design camouflages the real nature of the flight for users.

Figs. 6(a) and (b). Aer Arann’s Fare Types



5.1.4 Card Charges Policies

Amongst all the airlines evaluated, there is substantial gumminess in respect of charging for card processing. If LCCs are treated similarly by card processors, it might be expected the charges incurred would be passed on in a uniform manner. However, this study shows considerable variation in the way card charges are handled. For example, Aer Arann charges per booking (see Fig. 7), Aer Lingus charges per passenger, while bmibaby charges a percentage of the total payable and Ryanair charges for each passenger for each flight segment. Although difficult to find, Ryanair’s explanation of card charges is located on the Site Map under *Frequently Asked Questions* where a link to *Why is there a handling charge when I reserve my flights?* are explained in the following way. Ryanair claim they incur “substantial administration costs ... when processing credit and debit cards or ELV [i.e. *Elektronisches Lastschriftverfahren* or electronic debit procedure] direct debits” and must therefore apply a handling fee for each passenger per flight segment. Thus, it would appear internal administration costs have been disaggregated from the price and cited separately.

Chris Barry and Ann M. Torres

Fig. 7. Aer Arann's Transaction Charges



5.1.5 Frills or No Frills: Opt-in and Opt-out Fee-Based Services

Another gummy feature is the series of fee-based services, which customers must negotiate throughout the websites. Typically, the onus is placed on customers to opt-out of fee-based services. Most airlines have a preference for using this feature, which is well-known among commercial websites and by no means exclusive to the LCC industry. To illustrate:

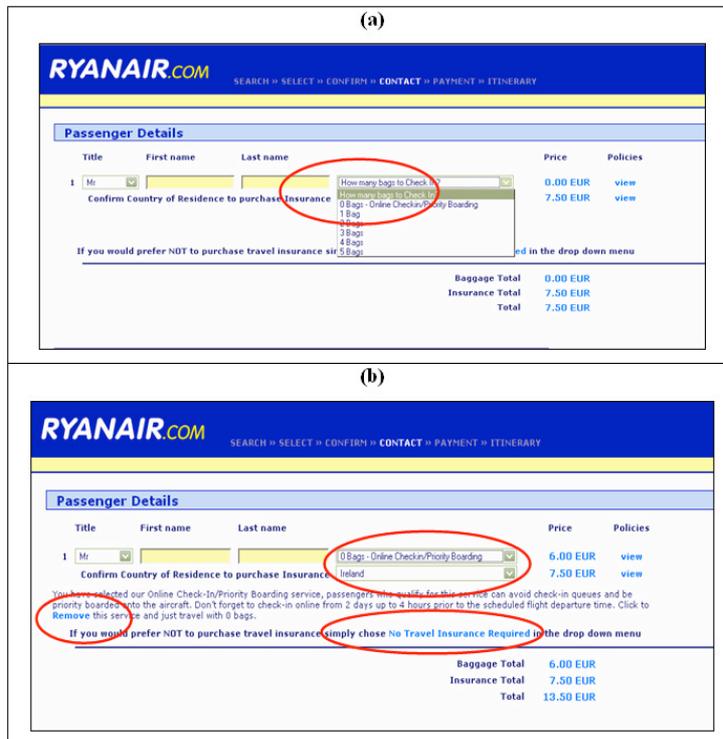
- Aer Lingus, bmibaby and Ryanair make users opt-out of travel insurance.
- Aer Lingus and Aer Arann force users to opt-out of the receipt of “occasional - emails about our services...” and to “receive news, new route announcements and special offers...”.
- Ryanair requires passengers without luggage to opt-out of priority boarding.

This last example violated the most heuristics during the analysis: the process of trying to choose the number of bags with Ryanair and whether the user wished them checked-in online or not. When the user enters passenger details, the number of bags is chosen from the drop down box, which quite clearly advises that should a user select 0 bags, they are automatically choosing *Online Check-in/Priority Boarding* (see the circle in Fig. 8(a)). Thus, it would appear a charge is unavoidable even if one is travelling with only hand luggage. This feature is not just misleading or vague; it is an intentional design feature to propel users into paid-for, online check-in. Once a bag-less user has pondered their options, they will find there is no way to progress unless 0 Bags - *Online Check-in/Priority Boarding* is selected. What happens next is quite remarkable; text instantaneously appears beneath the drop down box that allows the user to *Remove* the choice the system has led them to select (see the smaller circle in Fig. 8(b) and the text below).

“You have selected our Online Check-In/Priority Boarding service, passengers who qualify for this service can avoid check-in queues and be priority boarded onto the aircraft. Don't forget to check-in online from 2 days up to 4 hours prior to the scheduled flight departure time. Click to Remove this service and just travel with 0 bags.”

However, the user would need to be quick-sighted to catch the manoeuvre since it happens so swiftly and the *remove* option (in blue) is embedded deep within the text (in blue) so the unwary customer could easily miss the presentation of an opt-out choice. The sequence of messages that relate to the purchase of insurance are less explicit than they could be. The same screen (see Fig. 8(b)) applies a €7.50 insurance charge and, beneath a drop down box that defaults to *Ireland*, asks users to “Confirm Country of Residence to purchase Insurance”. It would appear from this message that insurance is unavoidable. However, further down the screen it states “If you would prefer NOT to purchase travel insurance simply chose No Travel Insurance Required in the drop down menu”.

Figs. 8(a) and (b). Ryanair’s Gummy Baggage Selection Process



5.2 Finding Cheap Flights

In the past, many consumers have found some advertised cheap fare to be *elusive* (Whitehouse, 2001). This evaluation discovered that some advertised *cheap* flights

Chris Barry and Ann M. Torres

can be found. However, the process may involve considerable time as well as a great deal of trial and error. All LCCs have headline offers, some inclusive of charges and others with the charges added on, although it is unclear if card charges are included.

Aer Lingus did not appear to have any cheap flights departing Ireland. There were plenty of advertised offers on the homepage, but they were from U.S. cities. To secure a Last Minute Offer of \$199 from New York to Shannon the applicable travel period (10/9/07 - 30/9/07) was clearly displayed, but a strap line stated “seats are limited and fares may not be available on all flights and dates.” When choosing a break of 1 week within those date limits only nine departing dates and eight return dates were priced at \$199. Taxes and charges brought this fare to \$482.65. The process was quite easy and Aer Lingus did make the advertised flights accessible to users. They even had a page that tells users how to secure the flight (see Fig. 9).

Fig. 9. Aer Lingus’s Cheap Flights

The screenshot shows a flight search interface for Aer Lingus. The main heading is "NYC to Shannon from \$199". Below this is a search form with the following details:

- Search for flights:** Includes radio buttons for "return", "one-way", and "multicity".
- From:** A dropdown menu with options: Naples (NAP), Newcastle (NCL), Nice (NCE), NYC (JFK), and Shannon (SNN) (selected).
- To:** A dropdown menu with options: Milan/Linate (LIN), Nice (NCE), Rome/DaVinci (FCO), and Shannon (SNN) (selected).
- Departing:** 5 August.
- Returning:** 5 August.
- My travel dates are flexible:** Yes (selected) / No.
- Fare Type:** Lowest.
- Adults:** 1.
- Children:** 0 (2-11 yrs).
- Infants:** 0 (< 2 yrs).
- Search >>** button.

On the right side, there is a section titled "How to get this fare" with the following information:

- Booking period:** until 06 August 2007.
- Days of travel:** Sun, Mon, Tue, Wed, Thu, Fri, Sat.
- Travel period:** from 10 September 2007 until 30 September 2007.
- Terms and conditions:** Fare is one-way and excludes taxes & charges. Subject to availability. Fare may not be available on every flight and date. Fare includes fuel surcharge of \$46.
- [Need Fare Tips?](#)
- [View all low fares](#) (at the bottom right).

Aer Arann display on its homepage that there are “Daily Specials: Dublin to Cork from €25 inc tax”, but when users click on the link it brings them to the usual price selection screen except that Dublin and Cork are pre-entered. However, there is absolutely no indication of how the advertised cheap flight can be bought. No expert evaluator was able to determine a mechanism to qualify for this fare. The homepage also provides a list of destinations, so it looks like flights from Galway to Edinburgh are €50, but once again, no way can be found to secure this price. Furthermore, the word *from* is quite a distance away at the top of the panel and it would be easy to overlook.

Ryanair’s homepage appears full of cheap flights (see Fig. 10). Flying “... cheaper to the UK” does make the terms of booking clear to the user. However, some experts found actually pinning down one of these offers impossible. Since the departing airport from Ireland was not specified, not only did it require trial

and error with dates, but also with airports. Nonetheless, one evaluator did find a return flight inclusive of taxes and charges for €20.

Fig. 10. Ryanair's Cheap Flights

With bmibaby, users are asked to *click here to view our cheap flights*. Upon doing so a page appears advertising all flights have 40% off from some UK airports only. However, on the homepage it clearly states there is a sale of up to 40% off all flights with some date restrictions (see Fig. 11). Choosing a return flight from Birmingham to Cork did show a free flight priced at £0.00 plus taxes and charges of £32.40, and presumably card charges. Reversing the flight from Cork to Birmingham returned one segment free and the other priced at €12.74, while taxes and charges came to a sizeable €48.61, totalling €61.35. An operational incongruity detected here is that sometimes, for example with the Dublin to Heathrow flight, one is transferred onto British Midland's main website www.flybmi.com with no way back to bmibaby, a serious violation of the heuristic that promotes the internal locus of control for users.

Fig. 11. bmibaby's Cheap Flights



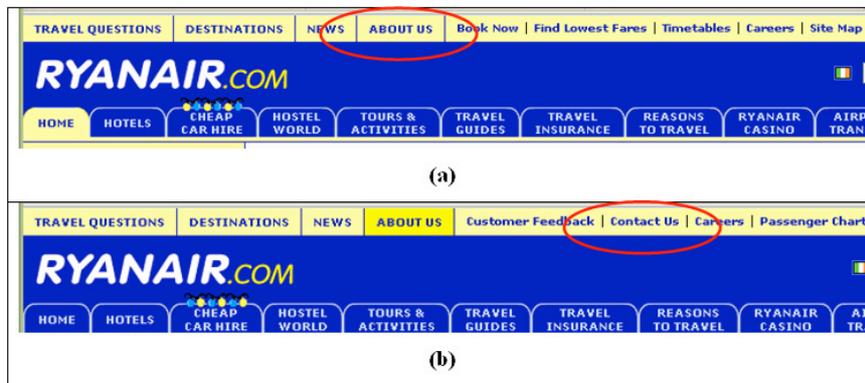
5.3 Contacting the Airline

5.3.1 Making an Enquiry or Giving Feedback

Contacting the airline directly can be for a variety of reasons, such as general enquiries, resolving post-sales issues, complimenting the airline, or complaining. For the most part, engaging with this functionality was highly problematic. For three of the LCCs (Aer Arann, Aer Lingus and bmibaby), there is a contact link at the homepage, usually requiring scrolling down depending on the size of your screen. Aer Lingus have two links - one through *About Us* at the top of the homepage's navigation bar, and *Contact Aer Lingus* in a lower sidebar navigation panel.

Ryanair proved to be the most challenging in locating contact information since there is no *Contact Us* or equivalent link on the homepage. The experts reported great difficulty in their attempts to find relevant contact information - as one observed "the user is forced to navigate blindly". Interestingly, the evaluators each navigated unique paths to try to find Ryanair's contact details. The most direct way is through the site map, where *Contact Us* is listed under *About Us*. However, from the homepage where users would ordinarily begin the expedition to find such information, if a customer clicks on the *About Us* link on the horizontal navigation bar at the top of the page (see Fig. 12(a) and (b)), the same navigation bar changes to include a *Contact Us* link. After some consideration, the experts believe this feature is an attempt to build a contextualised sub-menu of links relevant to the four main left handed links, a wholly confusing technique since the same colour text and background is used. The page itself displays the history of Ryanair and its growth in passenger numbers.

Figs. 12(a) and (b). Ryanair's Menu Structure for Contact Information



What happens next is exceptional. When the *Contact Us* link is clicked it displays a series of *Reservation Contact Numbers* that list telephone numbers for different countries. However, the left-hand panel changes to include another, different, *Contact Us* link (see Fig. 13). The manner in which the modified panel changes is extremely difficult to spot as one is naturally drawn to the central panel content.

Fig. 13. Contacting Ryanair

Selecting the *Contact Us* in the left-hand panel in Fig. 13 displays a series of questions and links, shown in Fig. 14. Some of these links in the central panel (titled *Contact Us*), are related to communicating with the airline on certain matters. Other links are meaningless in respect of contacting the airline, such as “Can you help me book a hotel, organise car hire, arrange car parking, get travel insurance etc?” or “I am interested in your financial reports, company information, and anything relating to your marketing strategy. What can you send me?” One link titled *Contacting Customer Service*, nestled in-between *Contact for Disability Requirements* and *How do I register with Ryanair for special offers?*, actually provides *real* contact information. Thus, two links on the same page with the same name, lead to completely different pages with different information.

Chris Barry and Ann M. Torres

Fig. 14. Ryanair's Contact Information Link

Only two of the six experts actually found Ryanair's contact information within an acceptable timeframe of a few minutes. There is no order or apparent logic to this design and it makes no sense if Ryanair wishes users to find contact details; it is either exceptionally poor design or deliberately gummy. The heuristic that websites should be designed so they are shallow rather than deep (Larson and Czerwinski 1998; Shneiderman and Plaisant 2004) is clearly violated in this instance.

5.3.2 Nature of Contact Information

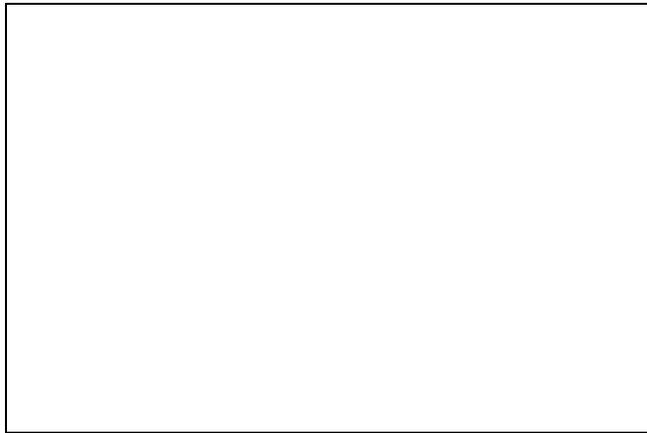
It is expected (ODCA 2006) that online businesses provide comprehensive contact information on a variety of pre-sales, sales and post-sales topics like reservations, technical support and customer relations. The LCCs presented this sort of information in distinctly different ways.

For Irish reservation enquiries, Aer Arann, Aer Lingus and bmibaby provide a low cost number, while Ryanair refer users to premium-rated numbers charging €1.75 per minute. Depending on the country, the kind of contact details Aer Lingus offer can vary substantially - some countries offer an array of contact details by providing an address, telephone number, fax number, and e-mail address; while

other countries may offer only one or two forms of contact details. Technical support is not visible for Aer Arann or Aer Lingus, while bmibaby offer FAQs and Ryanair refer users to the same premium-rated numbers.

Among the four airlines reviewed, Aer Arann commendably provide the most complete contact information (see Fig. 15). Not only were there full contact details for the head office in Dublin airport, but also contact information for Aer Arann's reservations desks across Europe, where in each instance, an address, phone number, fax number and email address was included. Moreover, Aer Arann uniquely facilitated post-flight assistance by offering email addresses for feedback, customer relations and refund queries.

Fig. 15. Aer Arann's Contact Details



For baggage handling, Aer Lingus offer low-cost phone support and, oddly on a different page, an email address. In the case of bmibaby, there are phone numbers and postal addresses for damaged and lost bags. Despite Aer Arann's otherwise excellent contacts page, no reference was found to a specific contact point for baggage enquiries. Ryanair supply telephone numbers for missing baggage enquiries at local rates. On a different page altogether, Ryanair provides a postal address and a fax number to which claims are made.

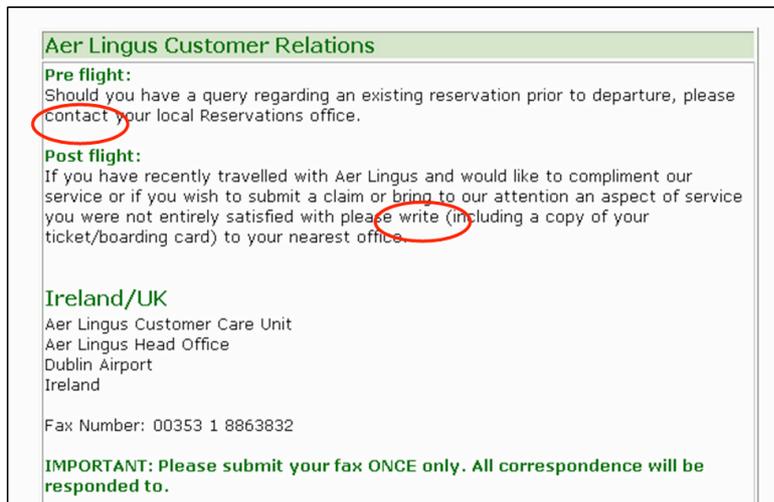
5.3.3 Making a Complaint

Experts were asked to examine how the LCCs websites dealt with an unpleasant experience they wished to report. Experts were largely unanimous that Aer Arann provided the best mechanism if they wished to make a specific complaint through the contacts page. However, they confusingly have *Feedback* and *Customer Rela-*

Chris Barry and Ann M. Torres

tions with email addresses for each and a phone number for the latter, but with no clear explanation as to what distinguishes them. When customers want to complain about (or compliment) an Aer Lingus flight, (i.e. post-flight assistance), they are asked to write to the nearest Aer Lingus office and to include a copy of their ticket or boarding card (see Fig. 16). No telephone numbers or email addresses are provided for post-flight assistance, which would appear to be an unhelpful manner in which to process a complaint, or indeed a compliment.

Fig. 16. Aer Lingus' Customer Relation Contact Details



Aer Lingus Customer Relations

Pre flight:
Should you have a query regarding an existing reservation prior to departure, please contact your local Reservations office.

Post flight:
If you have recently travelled with Aer Lingus and would like to compliment our service or if you wish to submit a claim or bring to our attention an aspect of service you were not entirely satisfied with please write (including a copy of your ticket/boarding card) to your nearest office.

Ireland/UK
Aer Lingus Customer Care Unit
Aer Lingus Head Office
Dublin Airport
Ireland

Fax Number: 00353 1 8863832

IMPORTANT: Please submit your fax ONCE only. All correspondence will be responded to.

Similar to Aer Lingus, bmibaby follows the same policy when it comes to pre-flight assistance, which is sales-related inquiries and post-flight assistance, which relates to complaints. However, even though bmibaby has an Irish presence in several airports they only advise customers using UK airports to contact them.

The Ryanair website provides a list of FAQ links. Thus, for pre-flight assistance customers may find the relevant information through the *Reservation Contact Numbers* and the *Internet Support* links, which list premium telephone numbers by country. For *Contacting Customer Service*, the link directs users to a series of postal addresses according to the nature of the issue. Complaints are to be written in English and provide full flight details (i.e., dates and routes) and passenger names. A key word search on the website for customer service returns another link for *How can I contact Ryanair* where a fax number is given for post-flight assistance. Again, faxed letters should be written in English and full flight and passenger details provided. According to *Ryanair's Passenger Service and Lowest Fares Charter*, the airline will respond to written complaints (to the email address provided at the time of reservation) within seven days. It is baffling that Ryanair can respond to complaints by email, but it cannot receive complaints by email. Also,

their claim on its website to have the fewest complaints in the industry rings somewhat hollow when the process of complaining is extremely difficult.

Although, it is common sense that making websites gummy when customers have complaints or concerns will increase the level of customer dissatisfaction, some LCCs appear prepared to take such risks.

6 Discussion

For LCCs, it appears many non-sales related activities are simply removed or distanced from the operations of the organization. This deconstructed, *no-frills* business model is reflected in the design of the supporting IS. That the IS should reflect the business model is precisely how a *good* IS should be designed. LCC self-service websites are thus primarily aimed at capturing revenues and appear highly effective, as they focus on sales committal and minimizing effort on the part of the customer. However, there remains a gap between the functionality one would expect to find in sophisticated, web-based IS and what they actually offer. Similarly, some of the features are unorthodox in their design. The differential cannot be explained by Ogburn's cultural lag thesis, which proposes material culture generally advances more rapidly than nonmaterial culture. Thus, physical and operational systems first appear while ethics, philosophy and belief systems surface much later (Marshall 1999). Certain questions arise from this analysis.

How is one to interpret these gummy design strategies? They are not accidental; the clear focus on assisting users in committing to sales contrasts radically with strangely ineffective, poorly accessible or completely missing functionality in other operational areas. It is evident that some firms are quite deliberately using web technologies to design out features one might expect in *traditional* information systems and to obfuscate or complicate others. To cite the most obvious examples: why, for the most part, do LCCs not provide email or web forms to facilitate customer communications; do they really expect customers to have a fax; why is it so difficult to quickly find contact details; and why are the structures of additional charges so unclear or fragmented?

What is it about self-service websites that lend themselves to this type of customer service? Such websites have certain unique characteristics that are different to bricks and mortar operations. The channel is indirect and features can be designed in (or out) in a way that would not be tolerated with face-to-face or telephone-based models. It is possible to de-market the business model far more effectively when direct contact is avoided. Self-service websites also devolve tasks to customers - delegating responsibility for accurate data entry and the initiation and cost of remedial procedures when things go wrong. A key consideration here

Chris Barry and Ann M. Torres

is how endemic the problem is? Is it common to all forms of self-service websites or primarily prevalent among the websites of LCCs?

Are customers inured to the gumminess of LCCs? Can it be that LCCs have succeeded in convincing customers that they must expect some level of pain and suffering in exchange for cheap flights? Do users believe that somewhere along the road to their reservation destination they are going to get *mugged*? If desensitised users are expectant of poor customer service, devaluation of the currency of language, little transparency, hidden costs, considerable effort, and intense wariness, then LCCs have achieved a remarkable relationship with their customers - all of it enabled without the exchange of conversation.

Is the web any less ethical than business practices elsewhere? Probably not, the virtual world reflects the real one. To help, corporate codes of ethics have been widely adopted in ways that range from moderating business practices to guaranteeing the principles of fair trade in the supply chain. However, new web technologies allow firms to develop obstacles and barriers that a bricks and mortar model would not facilitate.

Are ethics of IS and marketing professionals of any relevance? In a highly competitive industry that thrives on a low-cost strategy, simplicity and limited functionality are natural consequences for the design of IS. However, some IS/IT practitioners must be acutely aware that they are guilty of, at the very least, sins of omission in IS design practice. Furthermore it is, without evidence to the contrary, reasonable to assume there is a congruence of values between managers, marketers and IS practitioners. Specifications must have been designed that incorporated management policies that would undoubtedly violate the first principle of the Software Engineering Code of Ethics and Professional Practice that "software engineers shall act consistently with the public interest" (Quinn, 2006). While there are well-established, if dissimilar, professional codes of ethics in the IS/IT field (Oz 1993), the notion of emancipatory ideals (Hirschheim and Klein 1994), once feted in the IS literature, finding a role in the design of low-cost airline websites appears to have found little resonance in this area of practice.

LCCs employing gummy features in their websites are exhibiting the classic strategic flaw of having the trappings of marketing without offering substantive marketing practices (Ames 1970; Trustrum 1989; Peattie 1999). That is, LCCs offer superficial customer service on their websites, by discouraging customers to lodge complaints and concerns, resulting in service failures, poor service recovery, and ultimately, the potential loss of future revenue from these disappointed customers. In doing so, LCCs are pursuing a transactional rather than a relational model of marketing behaviour. They are seeking a high-volume of discrete, profitable transactions rather than a high-volume of profitable customer relationships enduring over time. The loss of existing customers does not appear to be a concern for many LCCs; they would appear to believe their low fares compensate for poor

service or justify the lack of service recovery efforts. Ultimately, these LCCs may be increasing their operating costs in the search for new customers. Moreover, they appear to manage their business as if there were an infinite supply of new customers. In time, perhaps the more successful LCCs will be those who offer customers competitive pricing policies as well as high levels of service recovery.

7 Conclusions

There are a number of implications of this study. While many business ethics issues are not manifestly new in web-based IS, it is “becoming apparent that the ethical dimensions of IS-related business decisions cannot be safely ignored” (Smith and Hasnas 1999 p. 111). It is necessary to renew the articulation of ethics in view of the capacity of new technologies to affect dubious practice. Ethical guidelines and frameworks in IS design and marketing; corporate and professional codes of ethics; and ethics in the IS and marketing curricula, also need to be revisited.

There is assumed ethicality in how IS are designed and how marketing practice is conducted; such assumptions need to be challenged. Writers have advised practitioners and teachers to be worried if there is a *complete absence* of contact information (Kassler 2002). This concern is largely focussed on the potential for deceit and fraud. It is not normally directed at *reputable* firms who obscure contact details to reduce interaction and dialogue. This oversight demands some revision in how information systems and marketing are taught to students of IT and business programmes. But how should teachers approach this issue – as an advocate of entrepreneurs or of consumers? Do teachers make students critically aware of gummy practices or should they demonstrate how they can be achieved to match the demands of business practice? Conversely, should educators more fully teach students how to develop systems so that they are *ethically* acceptable?

Social responsibility in corporate governance has become an imperative for many firms. Do LCCs using self-service delivery demand different standards because they are low-cost? Is there a layer of insulation that such operators enjoy because, to many non-technical observers, the nuances of intentional design practices remain unclear? The lowering of customer expectations that de-marketing has brought about, has lowered the threshold of systems design. Is this benchmark acceptable or is it a tolerable outcome of a Faustian-like bargain? While all of these questions involve a much broader social discourse, it is timely to debate them.

References

- Alamdari, F. and Fagan, S. (2005) Impact of the adherence to the original low-cost model on the profitability of low-cost airlines. *Transport Reviews*. 25(3), 377-392
- Alter, S. (2003) Customer service, responsibility, and systems in international e-commerce: should a major airline reissue a stolen ticket? *Communications of the Association for Information Systems*. 12(10), 146-154
- Ames, C. (1970) Trappings vs. substance in industrial marketing. *Harvard Business Review*. 48(4), 93-102
- Antón, C., Camarero, C., and Carrero, M. (2007) Analysing firms' failures as determinants of consumer switching intentions: the effect of moderating factors. *European Journal of Marketing*, 41(1/2), 135-158
- BBC News (2007) Action threatened over air fares. BBC News. URL: <http://news.bbc.co.uk/1/hi/uk/6759197.stm>, accessed 5 August 2007
- Clark, A. (2006) Ryanair ... the low-fare airline with the sky-high insurance levy. *Guardian*. URL: <http://business.guardian.co.uk/story/0,,1769707,00.html>, accessed 5 April 2007
- Cohen, A.J. (2006) Capital Markets at the Crossroads - Sustainable Investing: Environmental Focus. Goldman Sachs Global Investment Research
- Constantine, E. and Yourdon, E. (1979) *Structured Design*. Prentice-Hall, New York
- DeMarco, T. (1979) *Structured Analysis and Systems Specification*. Yourdon Press, New York
- de Neufville R. (2006) Planning airport access in an era of low-cost airlines. *Journal of American Planning Association*, 72(3), 347-356
- ECC Network (2006) *Report on Air Passenger Rights: Consumer Complaints 2005*. European Consumer Centre Network
- Hirschheim, R. and Klein, H. (1994) Realizing emancipatory principles in information systems development: the case for ethics. *MIS Quarterly*. 18(1), 83-109
- Houston, F.S. (1986) The marketing concept: what it is and what it is not. *Journal of Marketing*, 50(2), 81-87
- Hunt, S.D. (1976) The nature and scope of marketing. *Journal of Marketing*, 40(3), 17-28
- Jayachandran, S., Sharma, S., Kaufman, P., and Raman, P. (2005) The role of relational information processes and technology use in customer relationship management. *Journal of Marketing*, 69 (4), 177-192
- Kahn, A. (2002) Airline Deregulation. *The Concise Encyclopedia of Economics*. The Library of Economics and Liberty. URL: <http://www.econlib.org/LIBRARY/Enc/AirlineDeregulation.html> accessed 10 April 2007
- Kassler, H. (2002) It's a dangerous world out there: misinformation in the corporate universe. In Mintz, A. (Ed.), *web of Deception: Misinformation on the Internet*. pp. 51-74. CyberAge Books, New York
- Keaveney, S. (1995) Customer switching behavior in service industries: an exploratory study. *Journal of Marketing*. 59(2), 71-82
- Kotler, P. and Levy, S.J. (1969) Broadening the concept of marketing. *Journal of Marketing*, 33(1), 10-15
- Krug, S. (2000) *Don't Make Me Think – A Common Sense Approach to web Usability*. New Riders Publishing, San Diego, CA
- Larson, K. and Czerwinski, M. (1998) web Page Design: Implications of Memory, Structure and Scent for Information Retrieval. ACM CHI 98 Conference on Human Factors in Computing Systems. Los Angeles, USA, April 21-23
- Marshall, K. P. (1999) Has technology introduced new ethical problems? *Journal of Business Ethics*. 19(1), 81-90
- Martin, J. and Finkelstein, C. (1981) *Information Engineering*. Savant Institute, UK
- Murphy, P.E., Laczniaak, G.R., and Wood, G. (2007) An ethical basis for relationship marketing: a virtue ethics perspective. *European Journal of Marketing*, 41(1/2), 37-57

Tricks and Clicks: How Low-Cost Carriers Ply their Trade

- Nielsen, J. (1994) Heuristic Evaluation. In Nielsen, J. and Mack, R. (Eds.), *Usability Inspection Methods*, pp. 25-64. John Wiley and Sons, New York
- Nielsen, J. (1999) *Designing web Usability: The Practice of Simplicity*. New Riders Publishing, San Diego, CA
- Nielsen, J. and Tahir, M. (2001) *Homepage Usability: 50 websites Deconstructed*. New Riders Publishing, San Diego, CA
- ODCA (2006) *Office of the Director of Consumer Affairs Annual Report 2005*. ODCA
- OMG (1998) *Object Management Group: Unified Modeling Language Specification*. Framingham, Mass
- Oz, E. (1993) Ethical standards for computer professionals: a comparative analysis of four major codes. *Journal of Business Ethics*. 12(9), 709-726
- Payne, A. and Frow, P. (2005) A strategic framework for customer relationship management. *Journal of Marketing* 69(4), 167-176
- Peattie, K. (1999) Trappings versus substance in the greening of marketing planning. *Journal of Strategic Marketing*. 7(2), 131-148
- Quinn, M. (2006). *Ethics in the Information Age*. Addison-Wesley Publishing, London
- Rominger, E. (2007) *Social Responsible Investing: Here to Stay?* Goldman Sachs Global Investment Research
- Sharp, H., Rogers, Y. and Preece, J. (2007) *Interaction Design: Beyond Human-computer Interaction*. 2nd Edition. John Wiley and Sons, New York
- Shneiderman, B. (1998) Relate-create-donate: a teaching/learning philosophy for the cyber-generation. *Computers and Education*. 13(1), 25-39
- Shneiderman, B. and Plaisant, C. (2004) *Designing the User Interface: Strategies for Effective Human-Computer Interaction*. Addison-Wesley Publishing, London
- Sklar, J. (2006) *Principles of web Design*. Thomson Learning, London
- Smith, H. J. and Hasnas, J. (1999) Ethics and information systems: the corporate domain. *MIS Quarterly*. 23(1), 109-127
- Smith, A., Bolton R. and Wagner, J. (1999) A model of customer satisfaction with service encounters involving failure and recovery. *Journal of Marketing Research*. 36(3), 356-372
- Srinivasan, R., and Moorman, C. (2005) Strategic firm commitments and rewards for customer relationship management in online retailing. *Journal of Marketing*, 69(4), 193-200
- Tavani, H. T. (2007) *Ethics and Technology: Ethical Issues in an Age of Information and Communication Technology*. 2nd Edition. John Wiley & Sons Inc
- Trustrum, L.B. (1989) Marketing: concept and function. *European Journal of Marketing*, 23(3), 48-56
- Wagner, W. and Zubey, M. (2007) *Customer Relationship Management: A People, Process and Technology Approach*. Thomson Course Technology, London
- Whitehouse, C. (2001) Fare and Square. *Time Europe*. 157(10): 49. URL: <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=4181067&site=ehost-live> accessed 5 April 2007