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Opaque Web practices among low-cost carriers

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A B S T R A C T

The low-cost airlines' adoption of Web technologies to facilitate direct sales has accelerated their market penetration. However, some low-cost carriers are increasingly using Websites to create distance between themselves and their consumers in specific areas of their operations, while simultaneously developing excellence in sales transaction completion via self-service. The 'opaque' practices many low-cost carriers employ appear to be intentional design features and are contrary to the ethos of designing a 'good system' to facilitate the full spectrum of customer service. As a result, the low-cost sector has come under increased scrutiny for engaging in unfair practices and violating consumer protection law.

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1. Introduction

Increasingly, some low-cost carriers (LCCs) are using their Websites to create distance between themselves and their customer base in specific areas of their operations (such as accessible contact details and visible complaint procedures), while simultaneously developing excellence in sales transaction completion via self-service. This paper examines the low-cost, Web-based self-service airline industry in the Republic of Ireland and explores whether the industry is deploying design practices that violate usability principles and hinder customer service. The emergence of the LCC model and the nature of the industry are explored before a study is presented that scrutinises their Web practices.

2. The low-cost carrier phenomenon

The airline industry has evolved through three "waves of dramatic change and restructuring that heavily affected consumers and their travel decision making" (Rubin and Joy, 2005). The first wave of change was brought about by the progressive economic deregulation of the global airline industry from the late 1970s through to 2000s (de Neufville, 2006). Deregulation prompted intense fare competition and, accompanied by industry expansion, it spurred airlines to seek improvements in efficiency through the development of the hub-and-spoke route system and creating the notion of the 'full service network carrier' (FSNC). In the latter half of the 1980s, the heightened competitive conditions of a post-deregulation industry brought about the second wave of change; many airlines folded, consolidated, merged, or were acquired through leveraged buyouts (Rubin and Joy, 2005; Wagner et al., 2005). Consumers are currently experiencing the third wave of change, which some believe to be the most transformative, as it involves changes to long-term aspects of the airline industry: competitive structure, ticket purchasing, route patterns and the emergence of low-cost airports (de Neufville, 2008). This collection of changes to long-standing aviation practices has resulted in a sharper focus on operation costs, an area in which LCCs have made substantial gains.

Southwest Airlines is recognised as successfully implementing the original low-cost model (Alamdari and Fagan, 2005), which has since been widely emulated. Defining an LCC is somewhat ambiguous as there are many variations within the sector. Some LCCs rigidly follow Southwest's low-cost principles, while others pursue differentiation strategies in addition to undercutting competitors' fares. To trace the spread of the low-cost phenomenon, Francis et al. (2006) developed a typology of five broad types: Southwest copycats (e.g. Ryanair and easyJet), subsidiaries (e.g. Germanwings, Centralwings and bmibaby), costcutters (e.g. Aer Lingus and Iberia), diversified charter carriers (e.g. Monarch and Thomsonfly), and state subsidised carriers competing on price (e.g. Emirates). Despite these variations in strategy, LCCs "share a commitment to what Lawton (2003) terms the cult of cost reduction" by reducing unit costs, while simultaneously increasing output and productivity (Graham and Vowles, 2006).

Among the analyses of low-cost airlines, a common theme emerges: "the focus on a particular route length (short-haul), itinerary (non-stop flights) and customer type (price-sensitive)" (Shumsky, 2006). According to de Neufville (2006), "successful

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low-cost airlines share two key strategies; they avoid airports with congested airspace, runways, and taxiways and also avoid expensive capital [airport] projects" that had been favoured by legacy carriers and FSNCs. Avoiding congestion permits LCCs to minimise unproductive time in the air and on the ground, thereby cutting turnaround time to a minimum (de Neufville, 2006). As a result of avoiding congestion, LCCs may achieve aircraft productivity that is more than 50% greater than that of the FSNCs (Warnock-Smith and Potter, 2005). To further reduce costs, LCCs also avoid expensive ground facility rents in favour of less expensive facilities where they use their space more intensely. Thus, even when LCCs pay comparable per square foot rents as FSNCs, LCCs pay far less per passenger served because they require less space. Additional operational reductions are attributed to LCCs' lower pay scales, and their preference for non-unionised labour forces (Rubin and Joy, 2005). Consequently, the LCCs' healthy financial performance over legacy and FSNCs is attributed to improved cost savings rather than differences in revenue management practices.

Many believe the low-cost model is the most important change in airline strategy since the emergence of the hub-and-spoke route system in the 1980s. The LCCs' impact on the airline industry is significant, as they "have not just changed airline ticket pricing, but also consumer price expectations" (Graham and Vowles, 2006). As one analyst of the industry notes, consumers "have widely changed their buying criteria, preferring price and convenience over extensive connectivity and seamless travel" (Franke, 2007). Thus, cost reduction is believed to have become "a continued and permanent requirement if airlines are to be profitable" (Doganis, 2001).

European LCCs became a phenomenon in the mid-1990s and since then the European low-cost sector has attracted numerous entrants. As of late 2007, it is estimated there are 60 European LCCs in operation; but 50 entrants no longer operate (Low Cost Airlines Europe, 2007; Kerensky, 2007). Between 2000 and 2004, Ryanair and easyJet's passenger traffic grew at an average of over 40% per annum (Doganis, 2006), and now European LCCs are growing 20–40% annually (Alamdari and Fagan, 2005). Between 1999 and 2006, European LCCs gained more than a quarter of the European market (de Neufville, 2006), and it is a sector that is expected to expand further, particularly as the new EU–US Air Transport Agreement took effect in March 2008 (Association of European Airlines, 2006). Thus, "for the first time, European airlines can fly without restrictions from any point in the EU to any point in the US" (European Commission, 2008). The most important European LCCs are Ryanair, which has 31% share of the European low-cost sector, easyJet (26%), TUIfly (9%), Air Berlin (7%), and Aer Lingus (6%) (Association of European Airlines, 2006, 2007).

LCCs' commitment to cost reduction means they examine every function and service so as either to eliminate those considered superfluous frills or to charge for them separately as ancillary services to the basic fare. To bolster profit, LCCs have become adept at generating ancillary revenues, which are "the à la carte services and features that passengers may purchase before or during their travel experience. Legacy [and FSNC] bundle these services into the price of an airline ticket" (Sorenson, 2006). Ancillary revenue is an increasingly important financial component for LCCs. During the 2006–2007 financial year, Ryanair increased its ancillary revenues by 40% to €362 million, or 16% of their revenue (Association of European Airlines, 2007). Ancillary revenues for easyJet increased by 32% in the first half of the 2007 financial year, reaching £77 million or 11% of their revenue (Association of European Airlines, 2007).

With respect to the operational management of low-cost airlines, securing resources and developing competences in managing e-business tools have become crucial (Nucciarelli and Gastaldi, 2008). The LCCs' adoption of technology, in areas such as electronic ticketing and dynamic pricing, has become an important component in offering consumers more efficient flight options. Thus, the industry's increasingly competitive environment has favoured those "… customers who are now becoming more conscious of their needs. Furthermore, the Internet as an information and distribution channel with minor information and transaction costs intensifies these changes in customers' preferences and their behavior" (Teichert et al., 2008). Yet despite these advances, it appears a number of LCCs use their information systems in a conflicting manner when managing customer interactions, particularly when selling ancillary services and managing complaints. The Websites for many LCCs smoothly engage and facilitate customers through the self-service process to commit users to purchase tickets. However, once users move beyond the 'committal' point (i.e. after they have chosen where and when they wish to travel and received an initial quote), the Websites appear more opaque.

3. Website practices

Information systems have been developed using a wide tableau of methodologies and techniques, with the most widely used techniques being structured and object-oriented methods (Barry and Lang, 2001). Their origins are in scientific research and they are of a positivist tradition. Human–computer interaction (HCI) has long held that its basic goal is to improve the interaction between users and computer systems by making them more usable and amenable to the users' needs (Dix et al., 2004). Within these methods there is a near-universal supposition that a key goal of information systems development (ISD) is to improve usability and deliver a satisfying user experience, and that IS professionals should adopt a benign and moral posture. The authors would argue this supposition has become unsafe. To borrow the language of Argyris (1980), the 'espoused theory' of how IS should be developed is, for some, quite different to the 'theory-in-use.' The Websites of LCCs and their apparent contradiction of 'best' IS design practice, mean adopting a considerate and user-centred approach no longer seems to be a central tenet. Such, 'poor' Website practices are likely to erode on-line trust between LCCs and their customers.

The importance of on-line trust should not be underestimated; it "is a complex and dynamic phenomenon that cannot simply be 'produced' by applying adequate instruments" (Grabner-Kraeuter, 2002). Given that many consumers are sceptical about the mechanisms of e-commerce, trust has become essential in the diffusion and acceptance of e-commerce. Many firms that operate in fiercely competitive 'electronic markets', have come to recognise that consumers often rely on trust as a heuristic or short-cut to facilitate their decision making and reduce uncertainty. As trust is expected to "remain as a decisive factor in the success or failure of e-businesses, … it is an imperative for Internet companies to act in a way that engenders consumers' trust" (Grabner-Kraeuter, 2002).

Since the Internet's inception, there has been a decisive shift from supplier power to consumer power, namely: expert, sanction, and legitimate power. For example, firms' expert power has decreased with enhanced market transparency. Sanction power of consumer exit and consumer voice, has also been facilitated through market transparency as well as consumer networking. In particular, "voice has become more effective because consumer [compliments and] complaints, whether justified or not, spread rapidly on the Internet and sometimes also reach traditional media" (Rezabakhsh et al., 2006). While consumers' legitimate power has strengthened due to their active "influence in the value chain, [which] makes it possible for consumers to directly influence the price and the specification of goods" (Rezabakhsh et al., 2006).

In realisation of this enhanced consumer sovereignty of the Internet age, some firms have come to accept the empowered

consumer as a permanent market condition. These firms view consumer voice as useful feedback to improve products and services. "Therefore the Internet is not taken as a threat, but as a source of marketing intelligence and early warning" (Rezabakhsh et al., 2006). Indeed, complaints can be viewed as opportunities for service recovery that can turn angry, disgruntled customers into loyal, vocal advocates for the firm. Moreover, good service recovery typically translates into higher sales than if all had gone well in the first place (Smith et al., 1999; Keaveney, 1995). 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 et al., 2007). 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).

Certain opaque Web features appear not to be accidental in design and are beginning to come under regulatory scrutiny. Hidden costs and the exclusion of charges that are unavoidable is becoming an increasingly contentious issue that has attracted the attention of national and EU bodies. The European Consumer Centre Network (ECC-Net) also recommends airlines to make available their contact details for complaints, via telephone, e-mail and post; that complaints are dealt with within a reasonable time; and that booking confirmation includes a clear and comprehensive breakdown of all the supplementary charges, indicating what they are for and to whom they are payable (European Consumer Centre Network, 2007). Complaints received by ECC-Net regarding airline carriers nearly doubled from 2005 to 2006. Amongst these complaints, significant numbers were made regarding price displays, managing on-line bookings, as well as taxes, fees and charges (European Consumer Centre Network, 2006).[1]

In 2007, the European Commission co-ordinated the airline ticket selling investigation under the auspices of Consumer Protection Co-operation Regulation, which had came into force at the end of 2006. European Consumer Affairs Commissioner, Maglena Kuneva, believes there is a substantial problem with respect to airlines violating European consumer laws. Commissioner Kuneva cites the EU-wide investigation conducted by 15 national regulatory bodies (NRBs), which found 'unfair and misleading' practices in more than 50% of the Websites for LCCs and other carriers (Smyth, 2007). The investigation identified the most common violations related to price indications, availability of special offers, and contract terms. With respect to clear pricing, the Commissioner is directing airlines to give a clear indication of the price, including taxes and booking/credit card fees in the headline price first advertised on a Website, rather than at a late stage in the booking process. Accessibility of special offers was of particular concern, as in many cases these offers were not available or extremely limited. Commissioner Kuneva is requiring airlines to indicate clearly any limitations associated with special offers. Other unfair practices were found to include mandatory insurance attached to an offer, or where consumers were required to explicitly opt-out of insurance or other optional services (e.g. priority boarding, baggage, seat selection). Additionally, the Commissioner is obliging airlines to outline contract terms and conditions in a clear, fair and accessible manner.

4. Analysis

We establish whether users believe airlines are using information systems design practices that facilitate customer interaction when it suits them, but not when it comes to non-revenue-generating services, like complaints. It was also planned to explore their views on ancillary charges, regulation, and how favourably disposed users feel towards LCCs. Based on an examination of the literature and operations of the industry, it was decided to gather broad and specific data about how users perceive the usefulness and functionality of LCC Websites. Three research techniques were used: usability testing, verbal protocols, and focus groups. Usability testing was used largely to examine ease of use, verbal protocols to examine attitudes towards the Website and focus groups to explore in more detail issues and concerns arising from usability tests and verbal protocols.

Usability testing is generally carried out to determine a product's ease of use. It is carried out in a controlled environment, such as a laboratory, where users carry out prescribed tasks and their performance is measured. The users chosen should be typical of the final users of the system being tested (Sharp et al., 2007). User tests and user satisfaction questionnaires are the main methods of data collection. Performance is measured by collecting data such as the number of users able to complete a task. Users' attitudes towards the product are determined by employing questionnaires in which the product is rated on a variety of measurement scales.

In this study, a simple and focused usability test was conducted. Ninety-six student users completed a pre-test questionnaire, of which ninety-one completed three tasks (i.e. Find a Flight, Book a Flight and Make a Complaint) on two of four LCC Websites operating out of the Republic of Ireland, namely: Aer Lingus, Aer Arann, bmibaby and Ryanair.[2] The student users involved in this part of the study ranged in age from late teens to mid fifties. There were both full-time and part-time students in the sample, and all of the part-time, mainly older, students were working in a variety of full-time jobs. The students were predominately frequent travellers who had used the Websites of LCCs on multiple occasions. This convenience sample is consistent with the profile of on-line shoppers identified by Swinyard and Smith (2003) who found on-line shoppers to be mainly younger, wealthier, better educated and having higher computer literacy than those who do not shop on-line.[3]

A key measure was the number of users who completed each of the tasks. The order in which users approached the tasks was counterbalanced for each of the two airlines to avoid bias. To ensure the test was as realistic as possible, users were told to take as long as they liked to complete the tasks. They were also instructed to abandon the task at any stage if this is what they would do when carrying out that task in reality. After completing each task, they filled in a brief questionnaire to determine how easy the task was to complete. At the end of the test, users completed an additional questionnaire describing how easy they found the airline's Website to use overall.

Verbal protocols involve an end user thinking out loud while carrying out tasks on a system (Nielsen et al., 2002). This verbalisation helps the evaluator to understand the user's attitudes towards the system and to identify aspects of the design that are

[1] The European Consumer Centre Network (2006) recognises:"… airlines try to compete on the market by advertising very low prices, even reaching the level of 1 cent. However, when consumers reach the end of the booking process, the price may vastly increase, through the addition of all sorts of supplementary charges, such as airport charges, government taxes, baggage fees, credit card charges, fuel surcharges, etc. Clearly this blurs the picture for consumers and is misleading for them."

[2] As easyJet operates out of Belfast, Northern Ireland, it was not included as part of this study. Aer Lingus, previously an FSNC, has reinvented itself as a 'superior' LCC on its European routes, while largely retaining its FSNC orientation for its trans-atlantic routes (Graham and Shaw, 2008; Association of European Airlines, 2007; Dennis, 2007).

[3] These characteristics were further confirmed by Levin et al. (2005) for those who purchase airline tickets on-line.

Table 1
Number of flights purchased in the past 12 months.

Flights purchased in last 12 months	Participants
0	8 (9%)
1–2	51 (57%)
3–4	21 (24%)
5+	9 (10%)
Total	89 (100%)*

* N.B. 7 of the 96 participants did not answer this question, yielding 89 usable responses.

problematic for the user (Holzinger, 2005). During the interaction, the user is encouraged to talk aloud by the evaluator asking appropriate open questions such as: "Why has the system done that?"; "What were you expecting to happen?"; or "What has the system done now?" The sessions are generally taped and a separate note taker may also take detailed notes of the comments and actions of the user (Monk et al., 1993). In this study, seven typical users of LCC Websites participated in a series of verbal protocol evaluations. The participants ranged in age from early twenties to early forties and consisted of students and working people. They all have access to the Internet and use it to purchase goods and services. The participants in the verbal protocols were not involved in the usability testing as it was felt completing the tasks twice could introduce bias into the results. Each participant carried out three tasks (the same as those carried out in the usability tests) on each of two airlines' Websites. While conducting the tasks, participants were prompted to talk aloud and describe the interaction.

The tasks chosen for the usability tests and the verbal protocols were chosen on the basis that they were typical tasks that could be carried out by a typical user. Prior research (Barry and Torres, 2007) indicated that, in many cases, the design of the airline Websites was such that finding and booking a flight were more user-friendly than making a complaint. The tasks completed by the users were specifically chosen to determine whether there was a difference in the ease with which users could complete the tasks.

Focus group discussions are highly suitable to complement other research methods where greater understanding is required (Bloor et al., 2001). In this study, focus groups were considered suitable as a means to explore further insights drawn from usability tests and verbal protocols. Focus group participants were drawn from members of the usability test sessions. Five focus group discussions, of an hour duration were held, with each group consisting of four or five participants. The groups were intentionally kept small to ensure each participant, guided by a facilitator, could talk freely and spontaneously about the issues presented for discussion (Macnaghten and Myers, 2004). Moreover, the facilitators took great care in ensuring the questions posed were presented in a neutral manner to avoid leading participants in their responses. Discussions were taped and a note taker was present to document pertinent comments. The main issues for discussion in the groups were: the participants' experience of the booking process, their views on ancillary charges, their experience in attempting to complain, the role they believe regulation should play in this industry, as well as their general perceptions of each carrier.

5. Findings

5.1. Participant profiles

Usability testing was carried out with ninety-six under-graduate and post-graduate students from a variety of disciplines, both technical and non-technical. There were 51 male and 45 female participants, ranging in age from 18 to 55 years, with a mean age of 23.5 years. Participants completed a pre-test questionnaire to gather demographic information and to determine attitudes towards purchasing products and services on the Internet. It was established that 95% of participants had purchased some other type of product or service on the Internet and a similar proportion had previously booked LCC flights on the Website of an LCC. Of those participants that had previously booked LCC flights, Table 1 outlines the number of flights purchased in the past twelve months. The average number of flights purchased in 2008 was 1.79 flights.

5.2. Participant expectations

The participants were asked to specify, on a 5 point scale, how important each of the following factors was to them when purchasing a product or service other than a flight and when purchasing a flight: cost, ease of purchase, ease of navigation, ease of making a complaint and transparency of additional costs. In all cases, there was little difference in the mean level of importance (with 1 indicating very unimportant and 5 indicating very important) for each factor when purchasing a product or service and purchasing a flight (Table 2). When *t*-tests were carried out, the only factor for which there was a significant difference was cost, suggesting that cost is slightly more important to consumers when purchasing flights than when they are purchasing other types of products or services via the Internet. As can be seen by the mean values, four factors (cost, ease of purchase, ease of navigation, and transparency of additional costs) are extremely important to participants. Furthermore, they are largely of equal importance to them. The one factor that differs substantially is the 'ease of making a complaint', which while still important, is less so. This finding most likely represents the position of on-line consumers generally, who are more conscious of cost and ease of securing purchase (all pre-sale activities) rather than complaining (a post-sale activity) about issues that have not arisen.

The results indicate user expectations of purchasing flights (i.e. at the outset of the tests) are similar to purchasing other types of products or services via the Internet. This finding about expectations is important, as it suggests consumers do not at the outset, and perhaps in some abstract sense, expect Websites of LCCs to be less easy to navigate, less transparent in terms of charges or less easy to make a complaint. However, as will be shown later, the experience of participants deviates considerably from these expectations.

5.3. Overall ability to complete tasks

The percentage of participants being able to actually complete the tasks varied, with 98% of participants completing the task of finding a flight, 96% completing the task of booking the flight and only 44% managing to complete the task of making a complaint (about a damaged and uncomfortable seat they had to endure on a recent flight) (Table 3). The contrast here is stark – task

Table 2
Importance of factors to Internet consumers.

	Cost	Ease of purchase	Ease of navigation	Ease of complaint	Transparency of additional costs
When purchasing a product or service other than a flight	4.65	4.40	4.31	3.49	4.55
When purchasing a flight	4.80	4.45	4.26	3.48	4.60

Table 3
Attempted and completed tasks.

Airline	Find a Flight		Book a Flight		Make a Complaint	
	Attempted/completed task	% Completed	Attempted/completed task	% Completed	Attempted/completed task	% Completed
Aer Arann	41/40	98%	42/43	98%	45/31	69%
Aer Lingus	49/48	98%	50/47	94%	47/12	26%
bmibaby	34/34	100%	34/32	94%	36/14	39%
Ryanair	44/43	98%	43/43	100%	44/18	41%
Overall	168/165	98%	170/164	96%	172/75	44%

completion was only an issue for participants attempting to make a complaint. That more participants failed to make a complaint than those that were able to do so is alarming. This finding clearly demonstrates that these Websites are able to engage and support users easily in revenue-focussed activities, but fail in most cases to do so in service-related matters.

Views from the focus groups offer a revealing picture of the reasons why so many were unable to complain. Participants were cynical about the reasons why the task was at times impossible to complete within a reasonable time frame. They cited: contact details were hidden on purpose; navigation was constructed to deliberately throw users off; the Websites were designed to increase the time it takes to get the information. They believed that such design was deliberate, not accidental or unintended. As one focus group participant put it: "they don't want you to complain, as they might have to do something about it."

5.4. Ease of task completion

Those who attempted each of the tasks were asked to rank the difficulty of the task on a 4 point scale, with 1 = very difficult and 4 = very easy. Those that completed the Find a Flight task had a mean rating of 3.41, while those who completed the Book a Flight task had a mean rating of 3.35 (Table 4). Both tasks were deemed technically easy to complete by participants. In contrast, the mean rating assigned by those who completed the Make a Complaint task was 2.67. What emerged from both the verbal protocols and focus groups was a much more expressive confirmation of this finding.

t-tests were carried out to determine whether there was a significant difference in terms of ease of completion between the different tasks. There was no significant difference between the Find a Flight and the Book a Flight tasks, whereas there was significant difference between the Make a Complaint task and each of the other two tasks (i.e. $p \leq 0.01$ in both cases). The similarity in values, and the lack of a significant difference for the two tasks, Find a Flight and Book a Flight, suggests that both of these tasks are easy to complete. This finding is supported by the high completion rate for both of these tasks. In practice, these tasks would most likely be connected in the mind of the user, as it is necessary to find a flight before booking one. In contrast, the low mean value for the Make a Complaint task and its significant difference to the other two tasks suggest it is considerably more difficult to complete than the others. This finding is supported by the low completion rates for the Make a Complaint task.

Table 4
Ease of task completion.

Airline	Find a Flight	Book a Flight	Make a Complaint
Aer Arann	3.45 (40)	3.43 (42)	2.71 (31)
Aer Lingus	3.38 (48)	3.30 (46)	2.42 (12)
bmibaby	3.24 (34)	3.31 (32)	2.71 (14)
Ryanair	3.53 (43)	3.35 (43)	2.72 (18)
Overall	3.41 (165)	3.35 (163)	2.67 (75)

Note: number of observations in parenthesis.

5.5. Overall ease of use on LCC Websites

Usability test participants were asked to rate the overall ease of use of each airline's Website on a scale of 1–5 (see Table 5). A one-way ANOVA was carried out to determine whether there were significant differences between the airlines for overall ease of use. No significant linear trends were apparent. This finding suggests participants perceived no difference in the overall ease of use of the different airlines' Websites. This is somewhat surprising given the marked difference in the participants' ability to complete the task Make a Complaint and in their perception of the ease with which they completed the task. This finding is perhaps connected to the fact that participants ranked 'making a complaint easily' as less important in the pre-test questionnaire than other factors such as ease of purchasing. If they attribute less importance to this task, they may well not weight the difficulty in completing the task as highly as the other tasks when determining the overall ease of use of the Website.

5.6. Experiences complaining

The analysis shows it is significantly harder to secure complaint information than it is to find or book a flight. However, a considerably higher percentage of participants were able to complete the task Make a Complaint on Aer Arann than for the other airlines (Table 3). These findings are further supported by verbal protocols and focus groups where it was clear Aer Arann provided the most complete contact information, including both a phone number and an e-mail address under 'Customer Relations'. Nevertheless, participants were not wholly content with the Website. A second e-mail address was found under 'Feedback' where users were asked to "Get in touch and tell us what you think of our service." Users were confused as to which mechanism should be used to complain. Furthermore, finding this information was not easy; a 'Contact' link could be found by scrolling to the bottom of the homepage that leads to a series of contact departments, at the end of which are customer relations' details, which presumably one contacts if one has a complaint. Nonetheless, 69% of usability test participants were able to complete the task.

Only 26% of test participants were able to complete the task of making a complaint on the Aer Lingus Website. More problems were encountered with Aer Lingus than any other airline because of the ambiguous information found by following their 'About Us' link

Table 5
Overall ease of use of LCCs' Websites.

Airline	Mean	*N*
Aer Arann	3.91	44
Aer Lingus	3.80	49
bmibaby	3.86	37
Ryanair	3.90	41
Total	3.87	171

on the homepage. It reveals 'Aer Lingus Contact Information' with links for Ireland and UK to 'Reservations', 'Website Helpdesk' and 'Groups'. A 'Customer Relations' link could only be reached by scrolling down deeply on the same Webpage. No direct link to this information was found. Therefore, if consumers have a pre-flight query, they contact their local Reservations Office. However, if consumers want to compliment or complain about 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. A fax number is also provided. No telephone numbers or e-mail addresses are provided for post-flight assistance. Only one in four participants managed to reach this point. One participant from the verbal protocol, who attempted to complain to Aer Lingus, said: "this [process] makes you think I'll just go away and won't bother as it's too much hassle [to complain]" and that "when you complain [the airlines are] going to have to do something about it. Airlines just want to take your money."

Only 39% of test participants were able to complete the task of making a complaint on the bmibaby Website. With bmibaby a 'Contact Us' link on top of the homepage leads to a number of options including 'Customer Relations.' Consumers are asked to contact customer relations via a postal address if their flight originates in the UK, but no information is given if the flight is from Ireland, despite offering flights to and from Belfast, Dublin and Cork. Some participants felt this lack of contact information was an oversight, rather than a deliberate omission, while others felt the firm did not take their Irish operation seriously. It was noted by several verbal protocol participants that bmibaby's customer relations page does not state it has anything to do with complaints. The information is also strangely presented; one participant commented: "It just starts in the middle of a sentence and suggests it is for flights originating from Birmingham…" and refers users to a PO Box. Another participant remarked: "I would have thought that just sending an e-mail [to bmibaby to complain] wouldn't be that difficult."

Forty-one percent of test participants were able to complete the task of making a complaint on the Ryanair Website. Trying to contact Ryanair to complain was perceived as being more awkward than for the other airlines. On the homepage an 'About Us' link reveals the history of the airline. A strange technique is used whereby if a consumer clicks on the 'About Us' link on the main horizontal navigational bar at the top of the page, the bar itself changes to include other options including 'Customer Feedback' and 'About Us'. Customer Feedback led to a page of testimonials and 'Contact Us' to pre-flight Reservation Contact Numbers. A link titled 'Contact Customer Service' on a lower left panel can be found by scrolling down the page, which led to a page of contact information where consumers are provided with a postal address and fax number. The decision not to provide consumer contact information via either an 'About Us' or 'Contact Us' link is either exceptionally poor design or deliberately enacted. During one interaction with Ryanair, a verbal protocol participant found two 'Contact Us' links on the same page leading to two different pages before discontinuing the search. He commented that he would "go to a message board to find Ryanair's contact details", expecting it to be a more direct route. Another participant felt it was well known that "Ryanair makes it very difficult to make a complaint" and that even when he established the LCC had changed the Website to make it easier to find contact details he mused, cynically, that they must have been "legally bound to do so."

Several verbal protocol participants offered no confidence that using a supplied fax number or postal address would yield any response. One said "I'd be afraid that it would just be going into a black hole" and that "no one would pick up these faxes." Another thought "you'd have to be really mad to send a letter" and that "I don't think you'd get a reply." Similarly, the focus group discussions revealed deep distrust about the procedure for complaining to LCCs. Their collective view was that the airlines do not want you to complain and deliberately make it difficult for users to do so. It was observed by several participants that the provision of a fax number was a crude attempt to create distance between the airline and the customer. One participant summed up a common observation – "how many have a fax machine at home?"

The temporal dimension of complaining was discussed by most focus groups. One comment was: "I would never complain in reality; it takes too much time," while another observed "if it was an e-mail I'd complain, but I wouldn't write a letter." The view was commonly expressed that LCCs were fully aware that removing spontaneous communication channels would minimise contact around complaints and dissuade users from putting pen to paper.

In focus groups, when discussing whether these practices were acceptable it was noted: "unless it is cheap, it is not acceptable." This idea drew a clear relationship among participants between low-cost and low service. Several mentioned the industry has deconstructed flying, extracting the flight from other service elements and levying charges for each of these. As one participant put it, concurring with Rubin and Joy (2005), a flight "is just a commodity now." Interestingly, many focus group participants did not believe deflecting communications was a good idea in 'business terms' and believed that it would harm the reputation of LCCs in the long-run.

5.7. Experiences finding and booking flights

The Websites of LCCs achieved a high ease of use result from the usability tests. Few participants had any problem in completing the tasks of Find a Flight and Book a Flight. Since airlines raise much of their revenues from this activity it is perhaps unsurprising they would design their Websites so these tasks are as easy as possible for users. It is good business sense to engage customers through the self-service process so they commit to purchase flights. However, the ease of use masks demanding experiences during the process, which surfaced in focus groups and verbal protocols where participants expressed a range of emotions from irritation and frustration to cynicism and resignation.

In finding a flight, there are many design features that accelerate the process, from giving users the closest dates around the selected date (by default and when that date is unavailable) to retaining user dates and details. For example, Aer Lingus even allows the consumer to select departure and return flights for specific dates, where a screen is presented for which the priced flight is, in fact, the cheapest of a selection of other flights. Additionally, all of the airlines afford advanced design features such as animated route maps that superbly assist users in visualising what would otherwise be flat, tabular information. However, once users move beyond the committal point (i.e. they have chosen when and where they wish to travel and received an initial quote), each LCC has design features that adversely affect usability and trust.

All airlines quote an initial price that suggests it is either 'Final' or 'Total' whereas, in fact, it is neither. In focus groups, participants were unanimously of the opinion that this tactic was a stratagem for users to become psychologically committed to booking a flight. One participant voiced her annoyance in saying: "don't tell me it's the total price and then keep on adding things to it." Once you have "bought into the idea of buying the flight" (i.e. the 'committal' point identified above), a number of additional avoidable and unavoidable charges and 'services' are drip-fed to the user. On the addition of charges, a participant remarked: "I knew there would be charges, but I didn't think they would be so high" and another noted it was fairly standard practice "but it's still annoying because you never

really know until you get to the very end how much you are going to pay.'' When asked whether this purchasing process was reasonable, a participant responded: ''I've come to accept it is part of the [airlines'] tactics.''

Participants did not believe the headline prices quoted for flights and fully expected it to be different when they actually pay for it. During a verbal protocol, when asked whether he thought this was the price he was going to pay, a participant replied simply ''probably not.'' Another participant commented: ''customers realise that flights are not as cheap as advertised.'' After a quoted price moved from €12.80 to €67.00 a participant quipped: ''I feel I am paying a changed price.''

One verbal protocol illustrates the opaque nature of Ryanair's booking procedure, in particular. Once the participant had clicked on 'Confirm Flights' (that specifies the 'Total Cost of Flight'), seven different choices have to be negotiated before *finally* securing the flight. Five of these involve charges for baggage (opt-in), priority boarding (opt-out), airport check-in (opt-out), travel insurance (opt-out) and credit card charges (unavoidable). The remaining are personal information retention (opt-in) and newsletter (opt-in). Other airlines have similar, if fewer, obstacles to overcome. One participant perceptively noted Ryanair designed its pre-selected travel-insurance charge ''to get people to buy by mistake.'' On why he is asked a second time by Ryanair's system if he wants travel insurance, a participant answers: ''to make money, it's not illegal; if they can get away with it, why not?'' A similar view (''you'd have chosen it without knowing'') was expressed regarding bmibaby's travel insurance. Several focus groups felt LCCs designed their Websites in such a way that novice or older users would get 'caught' with additional charges while still perceiving LCC systems to be benign and not devious. Indeed, behavioural economists have found opt-out options to be highly profitable for firms that use them (Lunn, 2008). For example, if consumers are left to select the travel-insurance option, less than 10% will buy travel insurance. However, if consumers *have* to opt-out of a pre-selected insurance charge, then 40% of consumers will buy travel insurance (Lunn, 2008).

The inconsistency of the application of charges between LCCs and constantly changing airline policies leaves participants continuously wary and cautious. For example on credit cards, Aer Arann charges per booking, Aer Lingus and bmibaby charge per passenger, while Ryanair charges for each passenger for each flight segment. In the latter case, a family of six pays twelve credit card charges for a single booking. Participants speculated that consumers would never tolerate credit card charges being added on to a garage bill or when buying groceries and broadly concluded it simply represents revenue generation and is not related to the administrative cost of processing cards as some LCCs claim.[4]

It is clear that some airlines are more transparent than others; bmibaby is the only airline that includes all taxes and charges, but the latter appear very high and are not explained to the user during the booking process, while Aer Arann is the only airline that does not charge separately for baggage. The taxes and charges that each airline applies subsequent to the first quoted price, except for bmibaby, are all substantial and generally unavoidable. Aer Lingus and Aer Arann do not breakdown the cost during the quote or booking process. On Aer Lingus application of an unexplained 'handling fee' it was commented: ''so what's a handling fee if it's not a charge?'' While Ryanair does provide a 'details' link, it is a pop-up alert box that does not fully breakdown charges. Such fees are often significantly different for each leg and little effort is made to explain the differential. A somewhat similar technique is used by Aer Arann, which uses pop-up alert boxes to display different fare types denoted as 'Q', 'R', 'T', 'W' and so on. These fare type designations are unexplained and wholly confusing. Such lack of clarity in design camouflages the nature of the real price of a flight for users. Many participants felt there was ostensible transparency where headline prices including taxes and charges are quoted since there are so many other revenue-generating choices that need to be negotiated before a 'final' price is achieved. Furthermore, special offers that are widely promoted can be difficult and sometimes impossible to find, often involving trial and error with dates and airports. A strong view emerged that the LCCs could easily layout all charges up front instead of incrementally releasing the charges as users move towards a final card payment. The consensus on why this is not done is that LCCs do not want consumers to know the final price at the outset to dissuade users from reversing out of the process and also to avoid valid price comparison.

5.8. Overall disposition towards the LCCs

Focus group participants were asked how favourably disposed they were to the different LCC operators. Greatly mixed responses were received about Aer Lingus. There was a real sense of residual high regard for Aer Lingus and some still referred to it as the 'national carrier'. However, participants felt the airline and people's perception of it was changing rapidly for the worse. Many were of the opinion that Aer Lingus is losing significant opportunities by abandoning its traditional reputation for higher service and that it was following Ryanair in a 'race to the bottom'. This sentiment was illustrated in Aer Lingus treatment of their staff and of customers. Conversely, a few believed Aer Lingus was over-unionised. Many participants were unfavourably disposed towards the airline for the imposition of extra charges and it was often perceived as being far from low-cost.

Several participants were favourably disposed towards Ryanair as an indigenous Irish firm associated with leading low-cost flight and compelling other airlines to follow suit. However, negative sentiment was also widespread for a variety of reasons that included: hidden and 'sneaky' charges; poor flexibility; high baggage and excess-baggage charges; poor treatment of customers by staff; and lack of customer service. There was a real sense that Ryanair's booking process was 'booby-trapped' and contact information almost 'non-existent'. Several participants claimed they would either never book with them or only do so as a last resort. Some felt their homepage design was aggressive and 'in your face', but that it reflected Ryanair's outward image of belligerence and brashness. Mixed feelings were voiced about Ryanair's stated baggage policy of discouraging checked-in luggage by making it expensive to travellers. Some felt they should not be penalised in their flight cost by cross-subsidising fellow passengers, while others thought it was reasonable that a passenger should be given a baggage allowance as part of the quoted price. A view was also expressed that Ryanair does not suit older people who would need ''to know they'd be better looked after [i.e. cared for].'' Hence, older people and those with disabilities should choose to fly with another carrier where ''there'd be someone [to look after them] at the airport.'' Many participants did not like the way Ryanair presented itself, but felt resigned to choose them on the basis of price, as well as because Ryanair operates in destinations not well serviced by other carriers.

A more benign attitude was expressed towards bmibaby, perhaps because their presence in Ireland is not as extensive as the other LCCs. Participants felt their Website was well-designed, but

[4] It is possible for consumers to avoid credit card and laser charges by using a Visa Electron card to book their flights. Although the Visa Electron is available in the UK, banks operating within the Republic of Ireland do not currently offer this facility.

that significant supplementary charges were levied throughout the booking process. Taxes and charges were perceived as being high and that bmibaby made little attempt to explain them. One notable complaint was in relation to the seat selection page. Several participants commented they had used an interactive page displaying the cabin layout and available seating, but did not notice until the next page that seat selection would cost between €9.60 and €16.00.

There was a great deal of positive sentiment towards Aer Arann. Some considered Aer Arann to be more concerned with sorting out problems because they were smaller and more intimate. Participants felt their Website was largely well-designed with a clear presentation of flight information and charges. Not charging for baggage was an unexpected surprise for many users. On a negative note, a view was expressed that the airline was overly-subsidised by the Irish Government on some routes.

5.9. Role of regulation

All focus groups agreed that regulation should be increased to provide greater transparency in prices and charges. One participant observed: "there should be similar rules for all airlines" in the presentation of prices and charges so meaningful comparisons between airlines could be made. At present, participants felt this kind of price comparison was extremely difficult and only possible after a great deal of effort on the part of the consumer. Several participants felt optional services or charges should all be opt-in and, therefore, opt-out implementations should be prohibited.

Participants had little awareness that the European Commission had identified unfair and misleading practices on the Websites of many LCCs, but were pleased some effort was being made at a European level to monitor the industry. Some were cynical about such efforts, remarking: "there will always be regulation, but [LCCs] will always find a way around it". Focus groups had divergent views on regulation. A number of participants did not want too much regulation in case the industry becomes "tied up in red tape" and consequently less competitive.

Shortly after this study was conducted, evidence of increased regulation was already to be found. In July 2008, Members of the European Parliament (MEP) voted in favour of a directive to end ambiguous practices regarding airport taxes and additional charges. The EU's 2007 investigation on airline ticket selling investigation led the MEPs to safeguard the consumers' rights within the industry as, "air passengers have as much right as any other consumers to clear and comprehensive information about the price they actually have to pay" (Neate, 2008). "Under the EU regulation, all carriers will in future have to provide the general public with comprehensive information, 'including on the Internet,' on their air fares" (European Parliament, 2008). Thus, airlines will no longer be able to advertise €1 or €2 tickets for journeys that cost far more given the inclusion of all known taxes, surcharges and fees, such as those related to security or fuel. Moreover, "options such as travel insurance would only be able to be sold on an 'opt-in' basis, where buyers have to choose to buy the product rather than having to opt-out" (European Parliament, 2008).

MEP Timothy Kirkhope notes "there has been some resistance within the airline industry to transparent pricing", as "some airlines would have liked to have had some advantages over their rivals by not having to specifically itemise the amounts of money people are going to have to find when they buy a ticket" (Mason, 2008). Kirkhope suggests, "airlines being less than candid about their fares costs passengers a lot of money" (Mason, 2008). He continues by suggesting, "when people do the actual booking, they are already almost half-obliged to continue with it – and then find out what these extra charges are at a late point. It's clearly very unfair" (Mason, 2008). David Henderson of the Association of European Airlines (AEA) agrees, as he believes "consumers are getting a little bit fed up with the fact that what they pay doesn't always bear a great deal of resemblance to what they're offered" (Mason, 2008). MEP Arunas Degutis, who led the legislation through the parliament, believed the new directive should come into force in early 2009.

6. Conclusions

The findings reveal LCC self-service Websites work well in moving customers through the booking process as far as the committal point. In this regard they were deemed easy to use. It would appear low-cost airlines have the capacity to exploit sophisticated Web technologies to develop functionality with a high level of usability. In contrast, non-sales related activities, such as a complaint facility are strangely inaccessible to most users in this study and, for those who did find the information, it was difficult to do so. Furthermore, participants considered contact information as woefully inadequate, and concluded most LCCs simply did not want to be contacted for customer service that did not involve a revenue stream. Indeed, of the four LCCs evaluated, only Aer Arann has complied with the European Commission's recommendations on the supply of contact information. Such difficulties and omissions within non-sales activities are contrary to the ethos of designing a 'good system' to facilitate the full spectrum of customer service.

Other features programmed into LCCs' sales systems, after the committal point, are the antithesis of good design principles. For example, it becomes highly problematic in navigating towards a 'real' final price, necessitating the users to side-step a series of options. The eccentricities of LCC pricing may mean an advertised flight for €5 may cost more than €100, once extra charges are calculated and the booking process is complete, resulting in consumers feeling deceived and 'ripped off'. Such design failures are not explained by Ogburn's cultural lag theory that proposes ethical guidelines for the utilisation of new technologies are developed more slowly than the rapid emergence of modern technological advances. In this case, LCCs have proven their ability to design well, but if study participants' suspicions are correct, their managers either intentionally instruct developers to design certain features poorly or neglect to instruct developers in these areas at all. Thus, some IS/IT managers would appear to be in violation of their own Software Engineering Code of Ethics and Professional Practice (Association for Computing Machinery, 2008), which states software engineers and software engineering managers should act in the public interest and "subscribe to and promote an ethical approach to the management of software development and maintenance."

Since this study was originally carried out, some of the LCCs have changed their Websites, perhaps as a result of recommendations from the ECC-Net. However, while it is now easier to find contact details for Aer Lingus and Ryanair, it is still no easier to actually contact them. Aer Lingus has placed a contact link on the front page, but the relevant details are deep within the page. It still only provides a postal address and a fax number and also requires that a copy of the customer's ticket or boarding pass be included. Ryanair has included a contact link on the menu bar on the left hand side of the front page. The customer goes directly to the appropriate information but again, all that is provided is a fax number and a postal address. Ryanair also requires the customer to include their confirmation number. Neither Aer Arann nor bmibaby has changed their contact details, with bmibaby still not providing contact details for flights originating in Ireland. The fact that

Aer Lingus and Ryanair followed recommendations to improve access to contact details, but made it no easier to actually contact the airline, confirms the suspicions of many verbal protocol and focus group participants – that some airlines would find ways around regulation.

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