Customer satisfaction and call centers: an Australian study

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Keywords Call centres, Customer satisfaction, Australia

Abstract Call centers are growing at unprecedented rates, yet relatively little is known about customer satisfaction with this method of service delivery. Therefore, a review of the advantages and disadvantages of call centers is provided before reporting on a study carried out with users of a very large human services call center network. The results indicate that customers have slightly higher satisfaction levels with in-person services than with call center services. Although it was predicted that older customers might be more dissatisfied with call centers than younger customers, this was not borne out by the data. Attributes of a best-in-the-world call center operation are provided to guide those who design and manage call center services.

Introduction
New technologies and different modes of delivery are changing the experience of customers and staff in the services sector. Call centers and Web-based methods of service are becoming the norm in complementing the traditional telephone, office and mail services. In fact, it has even been argued that call centers might be the hub of successful customer relationship management strategies and the fulcrum of organisations (Mitchell, 1998). However, even though call centers have been in existence for a number of decades, little has been reported on customer satisfaction with this mode of service delivery. Therefore this paper will review the reported advantages and disadvantages of call centers from both customer and management perspectives; report on customer satisfaction with a very large human services call center operation; and comment on the managerial implications of the findings.

Advantages of call centers
Application of the technologies involved in call center operations can play a key role in accessing more customers, and in providing better quality services especially where additional or extended services become available (Walker and Craig-Lees, 1998). When high-contact (that is, in-person contact) services can be converted into low-contact services, through the use of technology, a number of benefits can result. First, and most obviously, customers can avoid attending the “service factory” (Lovelock, 1997). This leads to less cost and greater convenience for the customer. Second, the time taken for each transaction should be lessened due to less need for travel to office-based services; and, once
connected to the call center, services should be provided relatively quickly due
to the ability of the newer technologies to stream inquiries to unoccupied staff
in different call centers, perhaps even in different parts of the country. Third,
services can be more readily provided in the language of the customer’s choice,
due to the ability to direct customer calls to specific locations. Fourth, it has
been noted that some customers actually rate service quality of call center
contact higher than they rate in-person contact (Driver and Johnston, 1998).

For service organisations, these new technologies should facilitate greater
effectiveness and efficiency (Prabhaker et al., 1997). More customers can be
serviced at any one point in time, and, with customers taking at least part of the
responsibility for the streaming of calls (by selecting a preference from a
predetermined menu using the telephone keypad), fewer staff are necessary.
Fewer service centers with less space for customers should be needed leading
to a concomitant reduction in management staff and further cost reduction.
(Alternatively, more, but smaller, in-person service centers with less staff might
also be provided.)

Disadvantages of call centers
Notwithstanding the finding about perceived service quality of call center
contact (Driver and Johnston, 1998), customer satisfaction levels with face-to-
face services have been found to be significantly higher than with call center
services in the human services arena (Bennington and Cummane, 1998a). The
reasons for this are not always clear but it is possible that call center
technologies may not be well accepted in some cultures; the high take-up rate of
mobile telephones and Internet access (ABS, 1998) makes it unlikely that this
argument is applicable to Australia. However, there are still potential
disadvantages in relying on technology, especially if it fails. Services need to be
reliable as well as user-friendly (Hyslop, 1998). Generally, customers expect the
service to work each and every time and may become very angry when there
are technological problems. In fact, according to Calk (1998), today’s call center
customers want services performed better – they want easier ways of ordering
products and services, timely responses to queries and to be treated better.

The issues of timeliness and responsiveness are particularly pertinent to call
centers. Sarel and Marmorstein (1998) have pointed out that there are real
difficulties in consistently providing responsive service yet the majority of
customers neither expect nor condone delays. Thus, assessments of service
quality will be greatly affected when delays occur (Green et al., 1996). Zeithaml
and Bitner (1996) have provided eight explanations of different perceptions of
waiting time:

1. unoccupied time feels longer than occupied time;
2. pre-process waits feel longer than in-process waits;
3. anxiety makes waits seem longer;
4. uncertain waits are longer than known finite waits;
unexplained waits are longer than explained waits; 
(6) unfair waits are longer than equitable waits; 
(7) the more valuable the service the longer the customer will wait; and 
(8) waiting alone feels longer than when waiting with a group.

Given that call center customers do not have visual or other cues as to what is 
actually happening at the call center, and may well be anxious when they call, 
it is likely that any wait will be perceived to be too long. The challenge for call 
centers is to manage these perceptions.

Even if the “culture” has adopted telephone or other technologies and there is 
no waiting in the experience for the customer, not all customers may wish, or 
like, to interact with services providers via modern technology. For example, 
research has shown that up to 60 percent of customers still prefer to deal in-
person rather than via telephone (Centrelink, 1998). Prendergast and Marr 
(1994) showed that customers might become frustrated, put off or 
disenfranchised by having to deal with technology and pre-recorded voices 
rather than people. Some customers may not even feel capable of plotting their 
course to the right service provider by pressing numbers on their telephone 
keypad – and some older telephones do not have this capability either!

A further disadvantage may be the difficulty in building customer 
relationships without face-to-face interaction (Crome, 1998). It has been argued 
that the voice is “leakier” than the face, meaning that our true emotions are 
more likely to be picked up through voice only (Argyle, 1994), so, if this is 
correct, a further level of complexity (or possible opportunity) is created for 
managers of call center services.

Some services may be more amenable to low (in-person) contact than others. 
To assist us with this issue, Walker and Craig-Lees (1998) have characterised 
the services in which technologically assisted transactions may be open to 
negativity. These include: where there is high importance placed on personal 
contact, where a high degree of personal attention is required, where risk is 
perceived to be reduced by direct personal contact, where customers feel unable 
to use the technology, and where the technology is not seen to add value. Just 
like other aspects of service quality, these factors cannot be treated as 
“absolutes” – they will vary across customers and time, so detailed and up-to-
date knowledge of the customer base of any business is required for the 
planning and monitoring of service design options.

Need for research
Considerable attention is being devoted to customer adoption of Web-based 
technologies (e.g. see recent services marketing textbooks such as McColl et al., 
1998, for a chapter on technology, and journal articles such as Shih, 1998) but 
the academic literature has neglected the field of service quality in call center 
operations. According to Prabhaker et al. (1997, p. 2), “the modern call has been 
around for about 50 years yet is as current as tomorrow”. Thus, it is remarkable
that even though there have been concerns expressed about customer satisfaction with these operations (e.g. Crome, 1998), only empirical studies on staff (dis)satisfaction, rather than customer dissatisfaction, with call centers have been published. Moreover, given that the use of call centers has grown at unprecedented rates of up to 50 percent per year (Crome, 1998), and the world market for call centers is estimated to be Australian $350 billion (Burbury, 1998), this area provides fertile ground for quality service academics and practitioners. The questions that need to be addressed include the level of customer satisfaction with this mode of interacting with a services provider, attributes that are valued (or would be valued) and characteristics that customers find irritating.

The human services context
The context for this study is a major government human services provider. Apart from our own Australian research, there is very little published research on the experience of customers with human services (or public welfare) agencies so there is limited opportunity to compare satisfaction with the call center mode with other methods of service delivery. American research (Kraft and Bush, 1998), however, suggests that consumers are generally dissatisfied with the service quality in their public welfare system due to uncaring, insensitive, demeaning and disrespectful behaviours on the part of staff – their study was based on a relatively small sample of 58 welfare recipients and did not provide any data on human services provided via call centers. Our own customer research on the total service experience (call center and in-person) has also revealed that there is room for improvement in government human services delivery, yet the components which are important to customers are identifiable, e.g. nearly 40 percent of the variance in customers’ satisfaction with their public welfare service was found to be related to expectations of service quality, helpfulness of staff, accuracy, results obtained, age of recipient and whether recipients perceived that the staff were satisfied in their jobs (Bennington and Cummame, 1998a). Although this research considered satisfaction with the associated call center operation, it was not the primary focus of the study and only a small percentage (approximately 14 percent) of the variance in customer satisfaction could be accounted for. Thus, there is not only a need for further research on customer satisfaction with human services operations, but if call centers are the way of the future, we need to better understand the call center experience of the customer.

Given the range of government human services customers, though, one of the key questions that will need to be addressed is whether there are preferred modes of delivery for certain customer segments. Particular attention will be paid to older customers as age may influence the acceptability of newer technologies for a number of reasons. First, older customers have not grown up in the computer age. Second, their capacity for processing new information and learning new tasks diminishes with age (Bennington and Tharenou, 1996). Third, their short-term memory is not as dependable, and sometimes their
hearing is not as acute, so they may be concerned that they will forget information provided on the telephone, or they may need to have it repeated or provided in writing. Therefore it would not be surprising to find that older customers have lower levels of satisfaction with this means of interacting with a human services provider.

In summary, then, the research issues which will be addressed here focus on the level of customer satisfaction with the call center mode of interacting with a services provider, attributes that are valued (or would be valued) and characteristics that are irritating, whether older customers are satisfied with this mode of service delivery, as well as how customers compare traditional office-based services with call center services. Proposed loyalty, should alternatives become available, will also be examined.

The organisation: Centrelink

Centrelink is a one-stop shop that provides services in the following areas: retirement; employment; youth and students; families and children; disability, rural and housing; and multicultural services. Its activities include assessment, information, referral, payments and brokerage in human services. A total of 78 different payment types are managed along with 300 million contacts per year with over five million customers (Vardon, 1999). In addition to 23 call centers staffed by approximately 3,000 people, it has approximately 400 service centers and another 20,000 full-time equivalent staff across Australia.

In the creation of Centrelink there was an acknowledgment of a number of pressures: cost containment; the need to improve access for customers; the political requirement to meet customers’ increasing expectations of service quality; the need to remain abreast of rapid technological changes; and the increasing reliance on call centers. As Vardon (1999, p. 197) has said, “queues and counters ... are fast disappearing” and people will be dealt with more conveniently over the phone or in future by on-line access unless in-person contact is necessary.

Objective measures of the operation of the Centrelink call centers indicate that in 1998-1999, 17.87 million calls were handled by the customer service officers in call centers, averaging 67,942 calls per day (Conn, 1999). It should be noted that this does not include those calls successfully completed or terminated by the Interactive Voice Response Unit, which amount to approximately 5,000 calls per day (or 1.21 million calls per year). During 1998-1999 the average wait time was 205 seconds and the average talk time was 232 seconds (Centrelink Call, 1999).

Although during the period of this study (i.e. February to June 1998) the level of busy signals was very high due to major changes being implemented, Centrelink research indicates that for most types of transactions (for information on entitlements and services, simple problem resolution, and changes to basic details), the telephone was overwhelmingly the preferred choice for service delivery, despite access issues. Telephone research, using 4,207 customers and conducted by an independent organisation, found that 67
percent of customers rated the overall call center service as good or very good, whereas the quality of service centers was rated by 74 percent as good or very good (Centrelink, 1998). Not surprisingly, some customers indicated a preference to deal in-person rather than via the telephone service.

The most common complaint about the overall service provision of the agency was due to busy telephone signals from the call centers. There is a need, though, to balance the customer perception of busy signals with the reality of accessing the call centers. For example, in April 1999, a period of very intense demand, nearly 66 percent of customers successfully contacted the call center on their first call attempt and, overall, 77 percent made contact in three or less call attempts.

Retirement customers have been found to be the most positive about the service both in national surveys (Centrelink, 1998) and in our own research (Bennington and Cummane, 1998a), but complaints by this group have been rising steadily, particularly in relation to difficulties in accessing call centers (Centrelink, 1998). Those under 40 years of age have been found to be the most critical of call center operations, but it is possible that the reason for this has nothing to do with the mode of service delivery. Younger people are typically required to report certain information or activities to Centrelink so it may be that this requirement is the real issue. Previous research found that the greater the contact the less satisfied the customers (Bennington and Cummane, 1998a); moreover, older customers have very infrequent reporting requirements and the nature of the contact is less intense.

Centrelink is currently a monopoly provider but it is entering an environment where its services are likely to be subject to contestability so loyalty is a potential issue.

Sample
Participants included 128 customers who had contacted the call center during the previous six months; many of the customers (43 percent) had made contact between one and four times, although nearly one-third had made contact more than nine times during the period. The ratio of male to female participants was 45 percent to 55 percent. The age of customer participants varied from below 20 years to over 70 years, the mode being within the 20-30 age group. (A total of 159 staff were also included in the workshops, but, apart from brief mention, their data will not be reported here.)

Methodology
The methodology has been described in detail elsewhere (see Bennington and Cummane, 1997; 1998b) but essentially involves a sophisticated focus group technique which uses technology to facilitate the process of obtaining both qualitative and quantitative data. Customers are engaged in the process for approximately four hours each. The data reported here were drawn from eight workshops (value creation workshops) designed to focus primarily on customer satisfaction and perceived quality of the call centers. The workshop design was
extended to include two sets of standard questions which allowed a consolidation of the data across workshops. The survey questions were based on those used in the study of Centrelink’s service center operations (Bennington and Cummane, 1998a), and included quality expectations, satisfaction with service center operations, perceptions of service providers, output variables and loyalty. (These variables had been established in previous research as being important to the organisations’ customers, except in the case of loyalty which was of concern to the organisation – see Bennington and Cummane, 1998a.) Likert-type scales (based on a “1” to “9” rating) were used except in the case of loyalty which allowed for a “yes”, “no” or “unsure” response. Although a single item measure of loyalty was used, it is argued that the associated problems were mitigated by the simplicity of the question (Hallowell, 1996). All questions requiring ratings were answered anonymously via remote controlled keypads. Qualitative data were obtained using a visioning process followed by affinity diagramming (see Bennington and Cummane, 1997; 1998b for a description of this methodology).

**Results**

Although the difference in ratings between satisfaction levels with call center services and office-based services was statistically significant ($t = 21.81$, $df = 121$, $p=0.00$), for practical purposes the difference was quite marginal ($\bar{x} = 5.37$ versus $\bar{x} = 4.90$). The range of average responses across the variables was 4.2 to 6.0 on the nine-point scale. The lowest average rating was for “respectfulness of staff” and the highest rating was for “staff friendliness”. In terms of where most improvement was needed, customers indicated a desire of improvement in access once they had been connected to the recorded message ($\bar{x} = 6.8$) and improvement in the right information ($\bar{x} = 6.6$).

Improvement in access (once connected to the recorded message), however, did not reveal itself as a key variable affecting the global measure of call center satisfaction. Important areas arising from the stepwise multiple regression (on satisfaction) were expectations of quality service, rating of the staff and satisfaction with the service center, as can be seen in Table I. Variables that might have been predicted to be significant, such as the need for improvement in access, and age, were not included by the stepwise procedure due to the PIN = 0.050 limits being reached.

An additional consideration was the impact of customer satisfaction on loyalty: 43 percent of customers indicated that they would try an alternative operation if one became available; and 36 percent indicated that they were unsure about whether they would try another provider.

<table>
<thead>
<tr>
<th>Variable</th>
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<th>SE B</th>
<th>Beta</th>
<th>T</th>
<th>Sig T</th>
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<tbody>
<tr>
<td>Quality expectations</td>
<td>0.672</td>
<td>0.073</td>
<td>0.661</td>
<td>9.208</td>
<td>0.000</td>
</tr>
<tr>
<td>Rating of staff</td>
<td>0.461</td>
<td>0.075</td>
<td>0.453</td>
<td>6.145</td>
<td>0.000</td>
</tr>
<tr>
<td>Satisfaction with service center</td>
<td>0.1555</td>
<td>0.064</td>
<td>0.170</td>
<td>2.412</td>
<td>0.018</td>
</tr>
<tr>
<td>Constant</td>
<td>1.245</td>
<td>0.420</td>
<td></td>
<td>2.962</td>
<td>0.004</td>
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In attempting to determine which variables most affected loyalty a number of analyses were performed, but an insufficient amount of the variance could be accounted for, e.g. a multiple regression which considered variables such as access, quality expectations, satisfaction with the call center service and rating of staff revealed only one significant variable – rating of staff – but this only accounted for 4 percent of the variance.

Figure 1 plots satisfaction level against loyalty. Those who indicated “yes” were those who would switch to another provider should one become available. It can be seen that there were large numbers who were unsure as to what they would do faced with a choice, probably because they did not have access to information about switching costs (including whether any less value that might result in terms of confidentiality, delays in payments, etc.).

Age was predicted to be a significant factor in the satisfaction ratings of customers in respect to call centers. An analysis of variance did not reveal a significant effect for age ($F = 0.973$, $p = 0.461$, df $= 8,113$), but consistent with the earlier findings, younger customers were more critical of the call center operations.

The qualitative data (i.e. that referring to values and irritants) were consolidated and reduced in number using essentially the same affinity diagramming process used in the workshops; the only difference being that one customer and one researcher carried out this final process. All values and irritants were utilised but only those values and irritants that resulted in new categories with five or more mentions across the eight workshops were retained (i.e. at least five of the eight groups of customers had to have already agreed that the issue was important enough to be retained as a category). The resultant values and irritants are shown in Table II.

**Discussion and conclusion**

Consistent with the results of the earlier study (Bennington and Cummane, 1998a), the data show that customers are less satisfied with the call center service operations than they are with the more traditional office-based
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(in-person) services. Predictably, though, a much smaller difference was found between ratings of the office-based service and the call center service when recipients were selected specifically because they had used the call centers in the last six months. The processes customers experience in relation to the type of program assistance they access has an effect on their perceptions of service, that is, frequency of contact and degree of compulsion seem to be reasonable explanatory variables although these have not been isolated and independently empirically tested.

Given the problems experienced with busy signals (that on occasions can peak at a ratio of ten busy signals occurred to one answered call), it is possible that by improving the ratio of answered calls satisfaction with the call center operation will improve. This would seem to be a straightforward matter to address as observation of the Centrelink’s call center operations tends to suggest that at times the demand for call services is actually created by other parts of the organisation when complex information is forwarded to customers or when correspondence sent to customers contains instructions to contact the call center for assistance.

An opposing view might be put on the basis of the results of the regression analyses, though, because there did not appear to be any significant relation between satisfaction with the call center and access once connected to the recorded message. In other words, there appears to be a lack of consistency in the data. This might be due to customers not relating the apparent technical problems to their satisfaction level when in the customer-provider workshop data collection situation, although this is simply supposition. Notwithstanding the interpretation, this area still needs close monitoring and careful management. It should be possible to manage call center demand most of the time by properly testing written material prior to dispatching large mail-outs.

The loyalty data also present problems in interpretation. The fact that there is no clear pattern between loyalty and satisfaction may be because there is no obvious point of comparison, and because there is no information as to switching costs available. (There is no current alternative to Centrelink for the provision of the services in question, but, given the trend toward privatisation of government activities, this could possibly occur sometime in the future.)

<table>
<thead>
<tr>
<th>Values</th>
<th>Irritants</th>
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<tbody>
<tr>
<td>Reliable follow through</td>
<td>Lack of personalised/individualised service</td>
</tr>
<tr>
<td>Respect and mutual trust</td>
<td>Having to wait on the telephone</td>
</tr>
<tr>
<td>Understanding and caring staff</td>
<td>Uncaring communication</td>
</tr>
<tr>
<td>Prompt efficient service</td>
<td>Getting the “run around”</td>
</tr>
<tr>
<td>Easily accessible</td>
<td>The complexity of the telephone system</td>
</tr>
<tr>
<td>Open and effective communication</td>
<td>Unreliable information and service</td>
</tr>
<tr>
<td>Personalised/individualised service</td>
<td></td>
</tr>
<tr>
<td>Reliable information</td>
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Table II. What is valued and what irritates when dealing with call centers
However, for any services provider to hear that nearly half of their customers would prefer to use an alternative service, and up to about three-quarters might switch, is very concerning.

The prediction that older customers may not be as accepting of telephone technologies was not borne out; younger recipients were generally less satisfied than older recipients with the call centers, albeit that the findings were not statistically significant. As indicated earlier, the issue of “frequency of contact breeding contempt” might apply in this situation where much of the contact is enforced due to government regulation.

The qualitative data show quite clearly that the values and irritants provide almost mirror images of each other which provides insights for improvement efforts. The values, which were attributes customers envisioned in a “best-in-the-world” call center were not very different from what would be expected of any human services operation. None of the values related to the technology whereas the complexity of the technology was listed as an irritant. Having to wait on the telephone was also a major irritant.

In conclusion, large numbers of customers (1.45 million calls per month) are making use of the call center operation in this one organisation. Although this study, in conjunction with other data collected by Centrelink, has shed some light on customer satisfaction with this mode of operation it appears that it is difficult to isolate the call center operation from other parts of the organisation in the thinking of customers (e.g. satisfaction with the service center played a significant part in the explained variance in the satisfaction expressed in the call center). This is the same problem that arises when customers are asked to differentiate product from service characteristics.

The small sample size relative to the customer base of Centrelink also means that some caution needs to be exercised in interpreting the results, although there is consistency in the areas of overlap between this study and the previous study of the first two authors in which a much larger sample size was utilised.

The impact of the telephone technology on older customers does not appear to be a major concern for service planners but improving the actual and the perceived accessibility of the service and better meeting customer expectations is of concern in a continuous improvement environment, such as Centrelink. Aspects of the technology itself which affect adversely customer perceptions and artificial or unnecessary demand created for service by other processes in the organisation are both areas where there are positive opportunities to enhance customer satisfaction and loyalty.

References
ABS (1998), Household Use of Information Technology, Cat. 8146.0, Australian Government Publisher, Canberra.


Centrelink (1998), Strategic Outlook Report, Centrelink, Canberra.


