Asymmetric effects of customer emotions on satisfaction and loyalty in a utilitarian service context

Aude Rychalski [a], Sarah Hudson [b],*

[a] Univ. Bourgogne Franche Comté, Burgundy School of Business-CEREN, 29 Rue Sambin, 21000 Dijon, France
[b] Rennes School of Business, 2, rue Robert d'Arbrissel, 35065 Rennes, France

A B S T R A C T

This paper investigates the relative effects of customer positive versus negative emotions on satisfaction and loyalty in a utilitarian service setting. In-depth interviews with 20 call-center customers identify emotions and appraisals related to the customer service experience. Regression analysis of subsequent quantitative survey results from 1440 customers of a call-center shows that positive emotions influence satisfaction more strongly than negative emotions. In contrast, negative emotions influence recommendation intentions more strongly than positive emotions in line with prospect theory. However, for 'higher risk' repatronage the prospect of losses from switching reduces the effect of negative emotions resulting in a symmetric effect of positive and negative emotions on repatronage intentions.

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1. Introduction

Ensuring customer satisfaction and loyalty in the service industry is paramount for long-term corporate profits and success (Rust & Chung, 2006; White, 2010). The role of emotions, particularly of delight, in customer satisfaction and loyalty in hedonic services such as holidays or culinary experiences (Arnould & Price, 1993; Collier & Barnes, 2015; Hosany & Prayag, 2013), is a significant stream of research because customers approach these experiences with expectations of pleasure or excitement. In contrast, emotions have not figured much in studies of utilitarian service settings such as banking, health services or call-centers, where customers go to achieve routine or mundane tasks. Utilitarian services tend to focus on cognitive predictors of satisfaction and loyalty, like service quality (Rust & Oliver, 1994), or operational metrics such as waiting time, number of calls handled or problem resolution rate (Aksin, Armony, & Mehrotra, 2007). A general assumption in the services literature and in industry is that effective and efficient service performance leads to consumer satisfaction and loyalty. However, it is now undeniable that emotions '*powerfully, predictably, and pervasively influence decision-making*' (Lerner, Li, Valdesolo, & Kassam, 2015, p. 802). We can therefore expect emotions to influence customer outcomes in any setting. This study sets out to look into the relationship between emotions and their influence on satisfaction and loyalty in utilitarian service environments.

Why should we think that emotions have a role to play in service situations where customers use the service almost entirely for pragmatic reasons? In call-center settings, despite a lack of empirical evidence, the importance of customer emotions is implicit through references to customer 'irritants', 'anxiety', 'frustration' (Bennington, Cummane, & Conn, 2000; Peevers, McInnes, Morton, Matthews, & Jack, 2009) or even 'agony' (Whiting & Donthu, 2006). Some authors have suggested that emotions - particularly delight - are irrelevant (Dixon, Freeman, & Toman, 2010; Herington & Weaven, 2007; Loureiro & Roschk, 2014) in utilitarian contexts such as banking, mortgage or energy services. However, when we move away from the well-studied emotion of 'delight', some work indicates that other emotions can be important for customer outcomes such as satisfaction and loyalty in utilitarian service settings like cell-phone or telecommunications services or hospitals (Del Río-Lanza, Vázquez-Casielles, & Díaz-Martín, 2009; Dubé & Morgan, 1998; Haj-Salem & Chebat, 2014). The dearth of research in the area of emotions in call-centers may have arisen because the industry tends to use operational metrics such as waiting time or abandonment rates as adequate measures of service performance (Aksin et al., 2007), despite evidence that they do not predict important customer outcomes such as satisfaction (Feinberg, Hokama, Kadam, & Kim, 2002; Feinberg, Kim, Hokama, de Ruyter, & Keen, 2000).

Emotions therefore appear to play some role in services designed to fulfill largely utilitarian needs (Del Río-Lanza et al., 2009; Dubé & Morgan, 1998; Haj-Salem & Chebat, 2014). However, the nature of

* Corresponding author.
  E-mail addresses: auderychalski@hotmail.com (A. Rychalski),
sarah.hudson@esc-rennes.com (S. Hudson).

those emotions may differ from those observed and studied in service environments designed to fulfill and exceed hedonic needs and expectations. This article addresses the issue of identifying context-specific emotions in a call-center setting, where customers generally wish to achieve utilitarian-focused goals such as solving problems with their service, or opening or managing their accounts. We further look into how those emotions impact satisfaction and loyalty. In particular, through identifying emotions as independent positive or negative dimensions, we are able to examine potential asymmetries in the effects of negative or positive emotions on satisfaction and loyalty.

Positive asymmetry, where consumers attribute higher weight to positive than negative emotions in their decisions, occurs when the customer experiences 'delight', a positive, aroused emotion felt when a product or service exceeds expectations in a surprising and pleasant way (Falk, Hammerschmidt, & Schepers, 2010; Rust & Oliver, 2000). Positive asymmetry means that the presence of the 'delightful' attribute increases satisfaction and loyalty more than its absence decreases them. Oliver, Rust, and Varki (1997) questioned whether the asymmetry seen for hedonic services also exists in more 'mundane' services. If so, then such services should seek to enhance positive emotions; if not, then delighting the customer becomes unnecessary to ensure satisfaction and loyalty. This study indeed finds positive asymmetries for utilitarian services, but for different, lower arousal emotions than delight.

In contrast, negative asymmetries in the performance-satisfaction and performance-repeat purchase link also exist (Mittal, Ross, & Baldasare, 1998), explained through prospect theory (Kahneman & Tversky, 1979). Here, a decrease in performance has a larger negative effect than the positive effect of the same amount of increase in performance. To our knowledge, the relative effects of *emotions* rather than performance have not been the object of much empirical work. Yet if negative asymmetries for emotions exist in utilitarian services, then ensuring that negative emotions do not occur becomes of prime importance, perhaps more so than generating positive emotions. This paper finds that prospect theory is relevant and applicable to the domain of emotions, in that negative emotions have stronger effects than positive emotions on loyalty.

We further separate the loyalty construct into the dimensions of recommendation intentions and repatronage intentions since some authors (El-Manstrly & Harrison, 2013; Söderlund, 2006) suggest that the antecedents of these two outcomes can differ in their effects. As such, emotions could differ in their effects on repatronage versus recommendation. We thus explore the relative effects of emotions on these outcomes and discover that negative emotions have a stronger effect than positive emotions on recommendation but not on repatronage intentions.

In this paper, in-depth interviews with call-center customers reveal that emotions and appraisals are evoked in tandem, the whole representing positive and negative emotional states related to the customer service experience. A quantitative survey of a large sample of call-center customers then tests the relationship between positive and negative emotions, satisfaction and recommendation and repatronage intentions.

2. Conceptual foundation and hypotheses

2.1. Emotions

Emotions are important in the customer service experience and in determining customer outcomes (e.g. Babin, Darden, & Babin, 1998; Homburg, Koschate, & Hoyer, 2006; Watson & Spence, 2007; White, 2010). This paper follows the view of emotions that classifies them along the dimensions of pleasantness, sometimes termed valence (e.g. Babin et al., 1998; Izard, 1977; Lazarus, 1991), differentiating positive emotions from negative emotions.

We further conceptualize emotions not simply as pure emotions such as anger or happiness, but based on a mix of cognitive appraisals

and emotions. A recent review of emotions in organizations (Elfenbein, 2007) provides an overview of the psychology literature in this domain and attempts to move away from the difficulty of defining whether a) a stimulus causes an emotion with subsequent cognitive attention to the stimulus, or b) the cognitive appraisal of a stimulus causes the emotion. Elfenbein (2007) suggests that cognition (appraisal) and emotion occur together in response to a stimulus.

Finally, in line with Elfenbein (2007) and Barrett, Mesquita, Ochsner, and Gross (2007) we consider that an individual registers and feels emotions subjectively, and those emotions are context-specific. Barrett et al. (2007) suggest that to capture the emotions of a person, one should ask them to relate their experience in their own words. We do not assume that cognitive appraisal causes the emotion, nor that emotions alert the individual to focus attention on event. Instead, emotions and cognitive appraisals interact in a dynamic process, which individuals subjectively report as a mixture of appraisal and emotions, expressed semantically, in a specific context. Thus, respondents in this study use appraisal words such as "powerless" or "discouraged" as well as emotions like 'happy' or 'frustrated', all of which are included in the conceptualization and measurement of emotions in this work.

2.2. The emotions satisfaction link in utilitarian service settings

Many consumer studies in the area of hedonic experiences advance the idea that there is a link between emotions and satisfaction (see Bonnefoy-Claudet & Ghantous, 2013; Hosany & Prayag, 2013; Pullman & Gross, 2004). In this stream of literature, the emotions investigated are mostly positive, although some studies look at negative or neutral emotions as well, either as an indicator of a negative hedonic experience (e.g. Hosany & Prayag, 2013) or included as reverse indicators of positive emotions (Koenig-Lewis & Palmer, 2008). As one would expect, the emotions-satisfaction relationship is valence-congruent and positive emotions relate positively and negative emotions negatively with satisfaction (Del Río-Lanza et al., 2009; Liljander & Strandvik, 1997). Within this literature, Hirschman and Holbrook (1982) define hedonic consumption as the consumer behavior linked to multisensory, fantasy and emotive aspects of an individual's experience with a product. The consumption elicits emotional arousal around the product consumed, and '*in some instances emotional desires dominate utilitarian motives in the choice of products*' (Hirschman & Holbrook, 1982, p. 94). The positive asymmetric effect of delight on satisfaction is well-established in hedonic settings (Falk et al., 2010; Oliver et al., 1997; Rust & Oliver, 2000).

On the other hand, utilitarian motives for consumption revolve around functional needs such as achieving a task, e.g. getting the grocery shopping done, or consuming a product or service which is necessary for the household or solving a problem with a product or service (Voss, Spangerberg, & Grohmann, 2003). Many consumption experiences like shopping or staying at a hotel can include both hedonic and utilitarian aspects (Babin, Darden, & Griffin, 1994; Jones, Reynolds, & Arnold, 2006). However, some services such as a call-center are principally utilitarian in that customers use them for almost purely functional purposes. In general, services of this type fulfill utilitarian values more strongly than hedonic values (Chiu, Hsieh, Li, & Lee, 2005). For example, customers who contact a telecommunications call-center do so to activate an account, solve a technical problem with their internet or telephone connection, to manage their account or to complain, and have no expectations of a multisensory, fantasy or (positive) emotive experience. It is in this sense that we use the term 'utilitarian service'. Oliver et al. (1997) and Finn (2005) refer to this as a 'mundane' service.

The question arises, therefore, as to whether the positive asymmetry seen in hedonic services (Falk et al., 2010), through surprising the customer in unexpected ways and triggering delight (Oliver et al., 1997) also occurs in utilitarian services. Some empirical studies attempting to find a link between delight and satisfaction in more utilitarian services such as online banking (Herington & Weaven, 2007) or e-retail (Loureiro & Roschk, 2014) or call-centers (Dixon et al., 2010), find

none. This is hardly surprising since these service contexts are unlikely to be in the '*domain of delight …capable of providing pleasing unexpected performance*' (Oliver et al., 1997, p. 330).

This is not to say that positive customer emotions cannot occur during a utilitarian service encounter, simply that they differ. Reports of emotions such as happiness, pleasant surprise, or hopefulness (Liljander & Strandvik, 1997) exist in utilitarian settings.

We suggest that in utilitarian services, more muted positive emotions such as happiness or relief act in similar ways to delight in a hedonic service. Customers of call-centers often approach the experience with few expectations of pleasure, and can experience anxiety, frustration and anger before they make the call because they anticipate a difficult process (Bennington et al., 2000; Hudson, Gonzalez-Gomez, & Rychalski, in press). This being the case, the lower arousal emotions of happiness and relief, which can arise in a satisfactory encounter, occur as a positive disconfirmation experience. For example, Dubé and Morgan (1998) show an asymmetry effect in patients of a hospital where positive emotions during a hospital stay significantly predict retrospective satisfaction, whereas negative emotions do not. In contrast to the negative emotions commonly associated with call-center experiences, such as 'agony' (Whiting & Donthu, 2006) or 'frustration' (Bennington et al., 2000), the emotions of 'pleasant surprise' (Liljander & Strandvik, 1997) or 'relief' (Hudson et al., in press) indicate that positive emotions come as an unexpected, welcome and rewarding experience in comparison to rather negative emotional expectations. Our first hypothesis is thus:

H1. Satisfaction is influenced (positively) more strongly by positive emotions than (negatively) by negative emotions in a utilitarian setting.

2.3. The emotions - loyalty link in utilitarian services

Emotions are closely bound to loyalty, in that affective loyalty is one of the three dimensions of attitudinal loyalty. According to Oliver (1999) loyalty develops sequentially in a four-phase process, including the three attitudinal constructs of: a) cognitive loyalty - a belief about the superiority of a product, brand or service; b) affective loyalty - linked to emotions such as enjoyment and liking; c) conative loyalty -

reflecting a behavioral disposition to repurchase and recommend. The fourth, behavioral phase is action loyalty, where actual repurchase or repatronage occurs. In this study, following previous research in the context of call-centers (Dean, 2002, 2004, 2007) we concentrate on the conative dimension of attitudinal loyalty.

Recent considerations around the measurement of loyalty (El-Manstrly & Harrison, 2013; Söderlund, 2006) have suggested disaggregating conative loyalty into separate constructs of word of mouth (WOM) and repatronage or repurchase intentions for meaningful analysis of its antecedents and effects. Several authors have taken this approach (e.g. Bloemer, de Ruyter, & Wetzels, 1999; Jones et al., 2006; Rauyruen & Miller, 2007), and it is of interest in a study of emotions, since WOM is well-known as a form of reducing dissonance and anxiety, and allowing the venting of both positive and negative emotions (Anderson, 1998; Jones et al., 2006; Sundaram, Mitra, & Webster, 1998). In the emotion regulation literature (Grandey, Dickter, & Sin, 2004; Gross, 1998), venting is a form of coping with emotions to reduce the unpleasant or over-excited feelings that arise from an emotional event.

The number of articles that consider the effect of both negative and positive emotions as independent, separate predictors of loyalty is quite small. Most research has focused on a) emotions of the same valence (i.e. only positive or only negative emotions), b) emotions conceptualized as a one-dimensional 'emotions' construct or c) emotions as a moderating or mediating variable. In general, studies in these streams of literature find that positive emotions have positive direct and moderating effects on satisfaction and/or loyalty (Aksoy et al., 2015; Bloemer & de Ruyter, 1999; Gracia, Bakker, & Grau, 2011; Loureiro & Roschk, 2014; Ranganathan, Madupu, Sen, & Brooks, 2013), and that negative emotions have negative direct or moderating effects (Bougie, Piters, & Zeelenberg, 2003; Gelbrich, 2010; Wetzer, Zeelenberg, & Pieters, 2007).

Research studies that incorporate and test relative effects of both positive and negative emotions on loyalty in services are not particularly revealing about asymmetric effects. First, because asymmetry was not the focus of these investigations and second, the conceptualization and measurement of both the independent variables (emotions) and dependent variables vary ostensibly, as do the particular contexts. Table 1 provides a summary of the salient features of these studies.

Table 1
Summary of asymmetric effects of positive and negative emotions on loyalty-related variables.

Study context and variables	Relative effect of emotions
Chebat and Slusarczyk (2005): customers of Canadian Bank (utilitarian)	
Positive emotions: joy, hope. Negative emotions: anxiety, disgust. (Mediators of justice)	Negative > positive
Inspired from Plutchik (1980)	
Actual exit behavior: bank records of customers who had remained loyal or left the bank	
Westbrook (1987): US customers of cable TV subscription (utilitarian and hedonic)	
Positive affect: joy, interest. Negative affect: anger, disgust, contempt	
Taken from DES-II scale (Izard, 1977)	
Complaining:	Negative > positive (positive no effect)
Average of respondent reports of (a) number of complaint incidents and (b) number of topics	
Word-of-mouth:	Positive > negative
Average respondent reports of (a) frequency of discussions with others about CATV and local cable operator,	
(b) number of persons involved, and (c) number of topics discussed	
Han and Back (2007): student sample- recall of hotel stay (hedonic)	
Positive emotions: 24 emotions. Negative emotions: 14 emotions	Negative > positive
Modified CES scale (Richins, 1997)	
Re-visit intentions (1 item): the next time I need to stay at a hotel, I will stay at this hotel.	
DeWitt, Nguyen, and Marshall (2008) general consumer sample - scenario hotel & restaurant (hedonic – service recovery)	
Positive emotions: enjoyment, joy, pleasure, happiness. Negative emotions: enraged, incensed, irate, furious, distressed. (mediators of justice)	
Ellsworth and Smith (1988); Richins (1997); Smith and Bolton (2002); Smith and Ellsworth (1985)	
'Behavioral' loyalty: I intend to switch to a competitor of the service firm. (R); I will not acquire services of this service firm anymore in the future. (R); I would not visit this service firm again. (R)	Positive > negative
'Attitudinal' loyalty: I would be dedicated to doing business with this service firm; if this service firm were to raise its prices, I would continue to be a customer of the firm; if a competing firm were to offer better prices or a discount on their services, I would switch. (R)	

A closer look at these studies reveals that the emotions used differ from study to study. All cases except Chebat and Slusarczyk (2005) used existing scales that then underwent factor analysis to select appropriate emotions. Joy was a common emotion used for both utilitarian and hedonic settings, and negative emotions differed in the separate studies. The dependent variables included a variety of loyalty-related measures such as actual switching, switching intentions, repatronage intentions, complaining and volume (rather than valence) dimensions of WOM. Overall, the scant and varied empirical evidence does not provide a robust foundation for making a general hypothesis about asymmetric effects of emotions on the various outcomes.

In the context of this study, we therefore turn to prospect theory (Kahneman & Tversky, 1979) together with an examination of the particular outcomes, namely re-patronage and recommendation intentions in order to suggest how positive and negative emotions might influence these outcomes.

Prospect theory suggests that individuals are loss-averse and, as such, one unit of loss has a stronger effect than one unit of gain. Research into asymmetric effects of performance on satisfaction and repurchase intentions (Mittal et al., 1998) in the context of a health maintenance service supports this theory, showing that poor performance has a stronger effect than good performance on both dependent variables. On the contrary, Streukens and De Ruyter (2004) found no asymmetric effects of service quality on loyalty intentions (measurement not reported). They explained this contrast with Mittal et al.'s, 1998 findings on the basis that the service settings differed in terms of risk to the customer. The services they investigated included dry cleaning, fast food and supermarket, '*relatively risk-less purchase situations for consumers, implying that there are no obvious gains and losses*' (Streukens & De Ruyter, 2004; p. 108).

We extend this reasoning to post-service intentions and behaviors, and suggest that less risk is involved in recommendation than in repatronage intentions. Recommending (or not) a service is a low-risk strategy in that it costs the customer nothing and can relieve feelings, reducing dissonance and anxiety, and allowing the venting of both positive and negative emotions (Anderson, 1998; Jones et al., 2006; Sundaram et al., 1998). In line with prospect theory, we would therefore expect negative emotions to carry more weight in this decision.

In contrast, a decision not to re-patronize is riskier. The customer has to make an effort to find an alternative service, and switching costs can be high (Burnham, Frels, & Mahajan, 2003), so here loss aversion effects could cancel each other out. Customers' negative emotions mean that they are averse to undergoing the unpleasant experience again, and would wish to withdraw from the service. Here, prospect theory would predict a negative asymmetry – negative emotions would have a stronger negative effect on repatronage intentions than positive emotions. However a second effect acting in the opposite direction can also occur. Customers will also be averse to the loss occurring through spending the time, effort and money on changing operators. Here, prospect theory would suggest that customers would weigh the loss from switching more heavily than the 'emotional loss' incurred from staying with the service. In other words, the potential gain through switching in assuaging negative feelings counterbalances the loss through switching costs. We thus lose the asymmetrical effect, similarly to the observations of Streukens and De Ruyter (2004) who found symmetrical effects of negative and positive service quality perceptions on loyalty in more mundane services.

Hypotheses 2 and 3 are therefore:

H2. Recommendation intentions are influenced (negatively) more strongly by negative emotions than (positively) by positive emotions in a utilitarian setting.

H3. Re-patronage intentions are influenced equally by negative emotions (negatively) and positive emotions (positively) in a utilitarian setting.

3. Research method

There were two stages to this study. The first consisted of 20 in-depth interviews with call-center customers to identify the emotions and appraisals specific to a call-center setting, to develop an emotions measurement scale. The second stage involved survey data collection for hypothesis testing, collected from call-center customers of a single telecommunication company within one week of their service encounter.

3.1. Emotions scale development

In-depth interviews with 20 call-center customers generated semantic content for use in a subsequent emotions measurement scale. The recruitment of participants used purposive sampling of people who had a recent experience with a call-center in the telecommunication industry, from our personal and institutional networks. In order to compare and contrast their experience, respondents varied in terms of age and gender (Miles & Huberman, 1994). Nine men and eleven women participated. The average age was 42 years old, ranging from 24 to 62 years old. Selection of this approach, rather than using existing scales such as PANAS (Watson, Clark, & Tellegen, 1988) or DES (Izard, 1977) was for two reasons. First, emotions are context-specific (Richins, 1997) and best elicited in response to a specific event – in this case an encounter with a call-center. Second, generating semantic content through interviews with customers is in line with the theoretical view that emotions are a function of a '*conceptual structure that is afforded by language*' (Barrett et al., 2007, p. 304).

Using a semi-structured guideline, each respondent freely narrated a recent encounter with a call-center of a telecommunications service provider (Hopkinson et al., 1981). Reporting emotions is a good indicator of actual feeling states (Ekman, Hager, & Friesen, 1981). To facilitate emotional expression, interviewer interruptions remained minimal with open questions, followed by a direct question about the interviewees' feelings during the encounter. Face-to-face interviews each lasted between 53 and 118 min, and transcription followed immediately after the session. A first round of content analysis using NVivo after each transcription identified recurring and less frequently used terms pertaining to emotions and appraisals. Coding of four interviews in parallel took place by one of the authors and an academic colleague in order to reduce analytical subjectivity and to strengthen the reliability of the analysis (Miles & Huberman, 1994). Inter-coder reliability showed a satisfactory level of 89% (Bartunek & Rynes, 2010). One of the authors of this paper then coded and analyzed all 16 of the remaining interviews using the coding scheme established in the previous step.

Coding first placed the data into free nodes and then organized them hierarchically into tree nodes. At the end of the analysis, there were 131 nodes classified into 7 tree nodes (happy, relieved, frustrated, powerless, angry, stressed and discouraged) and 2 theoretical dimensions (positive and negative emotions). Overall, negative emotions occurred much more frequently than positive emotions, and the results yielded two positive emotions (happiness and relief) and five indicators of negative emotions (frustration, anger, powerlessness, discouragement and stress).

It is notable that the semantic content reveals that emotions and appraisals intertwine in their expressions. The interviewees spoke for example of feeling 'discouraged' or 'powerless' (appraisals) as well as 'angry', 'frustrated' or 'happy' (emotions). These results reflect the theoretical approach to emotional states as a dynamic mix of cognitive appraisals and 'pure' emotions suggested by Elfenbein (2007) and Barrett et al. (2007).

The qualitative analysis results enabled development of the emotions measurement scale survey for a pre-test and pilot test stage. The most frequently occurring emotions identified in the qualitative study formed the emotions scale. Positive emotions included 2 items: happy and relieved. Negative emotions consisted of 5 items: frustrated,

angry, discouraged, stressed and powerless. The five-point Likert scale was anchored following Izard (1977) with '1 = not at all; 5 = extremely'. The scale began with the question: 'Please rate the intensity of feelings you had during the phone call'.

3.2. Quantitative study - methods and measures

Fifteen people from business and academic organizations and call-center customers checked the questionnaire for face validity and language. A pilot test over a 1-week period checked scale reliabilities and validity. Average Variances Extracted (AVE) ranged from 0.51 to 0.83, and composite reliabilities ranged between 0.82 and 0.88.

For the main study, a large telecommunications company in France sent the survey link via e-mail to all 19,600 customers who had contacted their call-center within the last week. After five days, and 1538 respondents (7.8% response rate) we removed the questionnaire from the platform. After cleaning and eliminating cases with missing data, the final sample comprised 1440 respondents. Most had a higher education degree (50.4%). Also 30.3% of the respondents were in employment and 25.8% managers or executive level. Table 2 shows reasons for calling and the corresponding means for the variable under study.

Question order followed the course of a phone conversation starting with a question on the reason for and the urgency of the call. The subsequent section included questions on the emotions felt during the call, satisfaction and loyalty, finishing with demographic details.

Emotions measurement used the scale developed and described above. Inter-item correlation for the two positive emotions was significant ($r = 0.83$, $p < 0.001$). Negative emotions showed inter-item reliability $\alpha = 0.93$. Average variance extracted was 0.72, greater than the inter-construct squared correlation estimates (0.52) indicating discriminant validity between the two dimensions.

Satisfaction used one item, considered sufficiently neutral in terms of emotional and cognitive content: 'Considering everything, how satisfied are you with the phone call experience?' on a 5-point Likert item anchored by '1 = very dissatisfied; 5 = very satisfied' (Burns & Neisner, 2006; Oliver & Swan, 1989).

Loyalty consisted of five items based on previous research in call-centers (Dean, 2002, 2004, 2007), initially developed and refined by Zeithaml, Berry, and Parasuraman (1996) and widely tested in subsequent studies (Bloemer et al., 1999; Dean, 2002, 2004, 2007). Inter-item reliability tests gave $\alpha = 0.97$ for the whole scale. The scale included three recommendation intention items: 'I am likely to say positive things about this company to other people; I would recommend this company to someone who seeks my advice; I would encourage friends and relatives to do business with this company' ($\alpha = 0.97$). The two repatronage intention items were 'I consider this company my first choice to buy the appropriate services; I am likely to do more business with the company in the next few years' ($r = 0.87$, $p < 0.001$). Note

that confirmatory factor analysis supported the theoretical separation of repatronage and recommendation intentions. Kaiser-Meyer-Olkin measure of sampling adequacy was 0.90, above the recommended value of 0.6, and Bartlett's test of sphericity was significant (χ^2 (10) = 10,328, $p < 0.001$). Factor loadings on component 1 were 0.87, 0.75 and 0.72 (recommendation items) and on component 2, (repatronage intentions) were 0.82 and 0.84. Discriminant validity tests showed no discriminant validity, since average variance extracted (0.65) was lower than the squared correlation estimates (0.83). However, based on the theoretical stance that these two dimensions differ (Söderlund, 2006), we kept the recommendation and repatronage constructs separate in further tests.

Control variables: call urgency is a well-known factor in call-centers, affecting various customer outcomes such as perceived waiting time and satisfaction (Whiting & Donthu, 2009). Goal desirability and goal urgency are appraisals that have strong effects on emotions (Watson & Spence, 2007) and therefore we controlled for this variable in our model. Call urgency contained four items developed for the purposes of this study, asking participants to rate the degree to which the call was 'important to me', 'of concern to me', 'significant' and 'urgent'. The items anchored on 1 = 'not at all', 5 = 'extremely'. Inter-item reliability was $\alpha = 0.97$.

Reason for calling is also an important variable in determining customer outcomes such as perceived waiting time and satisfaction (Whiting & Donthu, 2009). For example, one could expect that calling for information or account management might involve fewer negative emotions than phoning to complain about service failure (Gelbrich, 2010; Harrison-Walker, 2012). To measure this variable, respondents selected one option from the categories: 'technical assistance; line activation; information; complaints; or account management'.

4. Results and hypothesis testing

Table 2 displays the variable means and standard deviations for the variables, along with five-way ANOVA results for testing significant differences in the variables according to the reason for calling.

ANOVA shows that all variable means vary significantly with respect to the reason for calling. Post-hoc Tukey tests generate three homogeneous sub-groups indicating that calls for *information and technical assistance* show significantly higher positive emotions, satisfaction, repatronage intentions and overall (composite) loyalty than calls for *account management or line activation*. Calling for purposes of *complaint* are significantly different from the first two sub-groups, showing the lowest scores on these variables. Negative emotions fall into the same three sub-groups with negative emotions significantly higher for *complaints* than for *account management or line activation*, which in turn show significantly higher means than calls for *technical assistance* and *information*. It is possible that these groups occur because of appraisals

Table 2
Means, standard deviations (*in italics*) and ANOVA results for study variables according to reason for call.

Reason for call	Positive emotions	Negative emotions	Satisfaction	Loyalty	Recommendation	Repatronage intentions	Urgency
Complaints (n = 111)	1.62(*0.98*)	3.78(*1.33*)	1.73(*1.04*)	2.53(*1.35*)	2.59(*1.38*)	2.45(*1.35*)	1.56(*0.68*)
Account management (n = 95)	2.07(*1.28*)	3.22(*1.56*)	2.25(*1.37*)	2.92(*1.30*)	3.03(*1.33*)	2.76(*1.32*)	1.79(*0.68*)
Line activation (n = 387)	2.15(*1.14*)	3.29(*1.35*)	2.35(*1.28*)	3.22(*1.21*)	3.23(*1.29*)	3.19(*1.18*)	1.66(*0.74*)
Information (n = 147)	2.58(*1.22*)	2.64(*1.41*)	2.80(*1.30*)	3.74(*1.19*)	3.80(*1.12*)	3.64(*1.22*)	2.17(*0.90*)
Technical assistance (n = 700)	2.64(*1.25*)	2.78(*1.43*)	2.87(*1.37*)	3.41(*1.20*)	3.46(*1.23*)	3.32(*1.21*)	1.72(*0.77*)
Total (n = 1440)	2.39(*1.25*)	3.01(*1.44*)	2.59(*1.36*)	3.29(*1.25*)	3.34(*1.29*)	3.22(*1.26*)	1.74(*0.78*)
ANOVA F (5,1435)	25.70[***]	20.04[***]	25.22[***]	19.86[***]	18.56[***]	20.11[***]	5.85[***]

[***] $p < 0.001$.

and emotions linked to goal importance (Whiting & Donthu, 2009). There is less at stake in the goal of obtaining information than of managing one's account (financial stakes) or activating a line (need for an essential service). In the case of 'complaints', the customer has experienced some sort of service failure and is more likely to hold negative emotions and service evaluations (Gelbrich, 2010; Harrison-Walker, 2012).

The sub-groups for recommendation intentions tend to overlap, but clear, statistically significant differences ($p < 0.001$) in the means are observed between complaints (lowest score) and the other call reasons, and between information (highest score) and the other reasons for calling. Finally, calls for information were significantly more urgent than other call types. However, in this sample the urgency scores were comparatively low, with a mean of 1.74 on a 5-point scale.

Table 3 shows the correlations between variables. Significant positive correlations exist between positive emotions and all dependent variables: satisfaction, the composite loyalty construct, repatronage and recommendation intentions, and with the urgency of the call. Negative correlations occur between negative emotions and all other variables.

To examine the relative effects of positive and negative emotions on satisfaction (Hypothesis 1), while controlling for call type and urgency, we conducted hierarchical regression analysis (Table 4). The control variables 'urgency' and (the categorical dummy variable) 'reason for call' were entered at the first step. Urgency showed no significant effect ($\beta = 0.03$, n.s.) whereas the reason for the call had a weak effect ($\beta = -0.04$, $p < 0.05$) on satisfaction. The main effects of positive and negative emotions were entered at the second step, explaining a significant share of the variance in satisfaction ($R^2 = 0.72$, $p < 0.001$). Positive emotions showed a significant, positive relationship with satisfaction ($\beta = 0.55$, $p < 0.001$) and negative emotions showed a negative effect, weaker than that of positive emotions ($\beta = -0.35$, $p < 0.001$), confirmed by *t*-test comparing effect sizes ($t = 6.73$, $p < 0.001$). The findings therefore support Hypothesis 1.

Using the same procedure as outlined above, we tested the relative effects of positive and negative emotions on overall loyalty, ($R^2 = 0.40$, $p < 0.001$) measured as a composite variable for purposes of comparison. The results show that the negative effect of negative emotions ($\beta = -0.37$, $p < 0.001$) on loyalty is stronger than the positive effect of positive emotions ($\beta = 0.29$, $p < 0.001$).

Of more interest, however, are the results of the relative effects of emotions on recommendation intentions and repatronage intentions separately. Hypothesis 2 suggested that negative emotions would have a greater effect on the 'low-risk' strategy of recommendation intentions than positive emotions. The results support this, in that we see the asymmetric effect of emotions seen for overall loyalty enhanced. Negative emotions affect recommendation intentions more strongly ($\beta = -0.38$, $p < 0.001$) than positive emotions do ($\beta = 0.27$, $p < 0.001$), confirmed by *t*-test results ($t = 2.68$, $p < 0.01$). Hypothesis 3 predicted that the asymmetric effect would not be present for the higher risk strategy of repatronage, and indeed we see that the effect size for negative emotions ($\beta = -0.31$, $p < 0.001$) is not significantly

Table 4
Results of hierarchical regression analyses[a], [b].

Variables	Satisfaction	Loyalty	Recommendation intentions	Repatronage intentions
Controls				
Urgency of call	0.03	0.07[**]	0.07[**]	0.07[**]
Reason for call	−0.04[*]	0.02	0.02	0.01
Main effects				
Positive emotions	0.55[***]	0.29[***]	0.27[***]	0.31[***]
Negative emotions	−0.35[***]	−0.37[***]	−0.38[***]	−0.33[***]
R^2	0.72	0.41	0.39	0.38
Adjusted R^2	0.72	0.40	0.39	0.38
F	922.99[***]	244.26[***]	229.88[***]	223.66[***]

[a]   N = 1440.
[b]   Standardized coefficients reported.
[*] $p < 0.05$.
[**] $p < 0.01$.
[***] $p < 0.001$.

different from that of positive emotions ($\beta = 0.33$, $p < 0.001$; $t = 0.50$, n.s.).

5. Discussion and conclusion

The findings contribute to knowledge in several ways. First, they show that positive emotions are important in a utilitarian service setting. Previous research has suggested that the emotion of delight is irrelevant in mundane services such as online banking (Herington & Weaven, 2007) or e-retail (Loureiro & Roschk, 2014). However, we suggest that while delight may not be relevant, other positive emotions play a strong role.

Second, by using emotions specific to call-center service customers, we reveal that lower arousal emotions such as happiness and relief are more likely to be operating in these types of services. We further suggest that these emotions are indicators of a positive disconfirmation experience leading to positive asymmetry (Falk et al., 2010; Rust & Oliver, 2000) in the effects of positive and negative emotions on satisfaction. In a call-center experience, customers approach the service with low expectations of pleasure, and can feel anxious even before placing the call (Bennington et al., 2000; Hudson et al., in press). As such, the emotions of happiness and relief have an enhanced effect similar to that of delight in services in the '*domain of delight*' (Oliver et al., 1997, p. 330), leading to a larger impact on satisfaction than that of negative emotions.

Third, from a field survey of 1440 customers of a major French telecom service provider, the analysis shows empirical support for prospect theory (which involves cognitive assessments that one unit of loss has a greater effect than one unit of gain) and shows that it can be extended to the domain of emotions. The higher weighting of negative over positive information, performance or quality is well-known (Anderson, 1998; Mittal et al., 1998) as are the subsequent negative asymmetric effects on satisfaction and loyalty. If we conceive of emotions and appraisals as a single construct, where cognitive appraisals and emotions coincide, each informing the other (Elfenbein, 2007), we would expect prospect theory to apply not only to rational decisions but also to emotional effects. Thus negative emotions indicate a prospect of loss, and have stronger effects than positive emotions.

Fourth, we show that the negative asymmetry in the emotional effects on loyalty occurs only for recommendation intentions and not for repatronage intentions. The latter are affected equally by positive and negative emotions. In line with recent suggestions that the separate dimensions of repatronage and recommendation dimensions of loyalty may differ with respect to their antecedents and effects (El-Manstrly & Harrison, 2013; Söderlund, 2006), our analysis shows that in the case of the asymmetrical effects of emotions, this is indeed so. We propose that because recommendation is a low-risk activity for the customer, he or she can relieve emotions by recommending (or not) the service. Negative emotions will have a stronger effect on this behavior than

Table 3
Correlations between variables in study.

Variable	1	2	3	4	5	6
1. Positive emotions						
2. Negative emotions	−0.72[***]					
3. Satisfaction	0.81[***]	−0.76[***]				
4. Loyalty	0.57[***]	−0.60[***]	0.63[***]			
5. Repatronage intentions	0.57[***]	−0.58[***]	0.61[***]	97[***]		
6. Recommendation intentions	0.56[***]	−0.59[***]	0.62[***]	0.99[***]	0.91[***]	
7. Urgency of call	0.20[***]	−0.29[***]	0.24[***]	24[***]	0.23[***]	0.23[***]

[***] $p < 0.001$.

positive emotions because psychologically the negative attributes of the service (felt as an emotion) are weighted more heavily than the positive (Mittal et al., 1998).

In contrast, repatronage has higher associated switching costs (Burnham et al., 2003) and is thus riskier. Customers who experience negative emotions report staying with their provider due to lack of other options, rather than a true desire to stay (Hudson et al., in press). Customer control of repatronage decisions is lower – recommendation is easy whereas repatronage/switching is difficult (Söderlund, 2006). As such, in spite of the potentially higher weighting of negative emotions, the customer also needs to weigh up the (negative) prospect of actually leaving the present service provider. In this case, any of the above considerations: switching costs, lack of switching opportunities, or lower control of repatronage decisions could temper the effects of negative emotion. This dampening effect then leads to a symmetrical, valence congruent relationship between negative and positive emotions on the one hand, and repatronage intentions on the other.

The research presented here indicates that call-center managers may need to extend their current quality indicators such as waiting time, average speed of answer or average abandonment by the caller, and measure customer emotions as well. Employees dealing with complaints, and even line activation and account management, need to manage customer emotions with care, since these calls create higher negative emotions. Keeping customers satisfied and happy is not enough to keep them fully loyal. Negative emotions, in particular, diminish the likelihood of positive recommendation. In order to maintain true customer loyalty, managers need to avoid engendering negative emotions in their customers.

6. Limitations and future research

Some limitations exist in this study. First, improving the measurement of loyalty to include switching costs and negative word-of-mouth could allow a better understanding of the results. Re-wording the loyalty items used in this study could also ensure better discriminant validity between repatronage and recommendation intentions.

The second limitation concerns the lack of investigation into the potential moderators of the relationships studied. For example individual and context based moderators of the emotions-outcome link such as emotional regulation (Gross, 1998) and display rules (Ekman, 1972), personality, perceptions of control and certainty (Watson & Spence, 2007) could have important effects. The inclusion of perceived risk as a moderator between emotions and recommendation and repatronage could provide more help in explaining the different effects of emotions on the two outcomes. Finally, the results may vary for another telecommunication company, a company from a different service sector or another type of customer (for instance, business-to-business clients).

Future research could investigate differences of emotional and behavioral responses to disembodied service encounters versus physical services (Bitner, 1992). The importance of emotions may differ, since the lack of physical and visual cues in a call-center setting could enhance appraisals of uncertainty and reduced control. Further analysis could also focus on how asymmetrical effects of emotions can differ according to other contextual factors such as call type.

Another area of research could pursue how the asymmetrical effects of emotions change over time. Customers of call-centers could come to expect better emotional experiences over time, and the positive asymmetry seen for satisfaction could disappear. Similarly, if switching from call-center providers becomes easier or if new competitors appear who offer better value, customers may experience diminished perceptions of switching costs and a negative asymmetric effect of emotions on repatronage intentions could appear. Because this is a somewhat under-researched domain, future research can usefully pursue the area of emotions in utilitarian service settings, to enable improved service in a multitude of sectors.

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