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THE INFLUENCE OF CLIENTS ON THE BEHAVIOUR OF APPRAISERS AND VALUERS: AN INTERNATIONAL STUDY

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Abstract: Patterns of bias have been uncovered in the property valuation process under circumstances where the appraiser or valuer is aware of the pending sale price. Such bias is an important issue because it affects the degree of precision to which mortgage loans are collateralized. However, little investigation has been done of the underlying causes of price-knowledge induced appraiser or valuer bias. The study described here explores two likely causal factors, which are posited as interlinked: client influence on the valuation process and practitioners reframing the valuation goal to "validate sale price". The study was conducted in late 1997 using samples of 1,200 US appraisers and 1,200 UK valuers. The findings confirm that when the outcome of the valuation does not support the pending sale price, clients do provide feedback to appraisers and valuers. Coercive feedback is more frequent in the US than in the UK. In the US the posited link between feedback and appraisers' altered perceptions of their goal is supported. In the UK, however, while there is significant goal reframing, the link between this and client feedback is at best weak. The paper explores what other factors may be at work in the UK. It concludes that in the UK it is necessary to look beyond the influence of business relationships to the issue of task familiarity so as better to explain behaviour modification.

Introduction

Real estate appraisers and property valuers[1] are experts who are trained to apply the valuation process in the solution of valuation problems. The valuation process is a normative framework that systematically leads the appraiser or valuer through each step of the valuation algorithm.[2] When an appraisal or valuation is commissioned for mortgage lending purposes, the goal is to estimate market value (US) or open market value (UK). In both countries, this concept implies an opinion of the most probable price (Appraisal Standards Board, 1997; Royal Institution of Chartered Surveyors, 1998)[3] and thereby the existence of a probability distribution of possible prices. Within this probability distribution, market (or open market) value is the "expected" value, or average price arising from repeated sales of the subject property under identical market

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1 The term "appraiser" is used here to refer to US practitioners and the term "valuer" for UK practitioners.
2 For appraisers, the seven-step algorithm is define the problem, preliminary analysis and data selection and collection, highest and best use analysis, land value estimate, application of the three approaches to value, reconciliation of value indications and final value estimate, and reporting of the defined value to the client (Appraisal Institute, 1996). Though not captured in a single document, a broadly similar process is inherent in valuation education and training in the UK. There is no expectation, however, that the UK valuer will use more than one approach to value.
3 Although the RICS definition of *open market value* makes no direct reference to most probable price, embodiment of this in the definition may be implied from the commentary accompanying the RICS

conditions. In reality, repeated sales in such conditions do not occur. The mortgage valuation process therefore involves inference of the most probable price through analysis of the price and value-ascribable characteristics of comparable sales (i.e., the comparable sales process).

With most mortgage valuations, however, an additional factor - the pending sale price - comes into play. This cannot be treated as a comparable sale price (although in both countries there is a widespread acceptance that valuers or appraisers should be aware of this prospective figure). The likelihood is, however, that the pending sale price *will* fall within the probability distribution of prices. This raises the prospect that valuers will act so as to validate whether this likelihood can be confirmed. The use of the comparables sales process to validate a price in this fashion is, in information-processing terms, a fundamentally different process to that of seeking to arrive at an estimate of the most probable price. Put simply, validation of pending sale price is a different problem-solving goal to that of estimating market (or open market) value. This reformulation of the mortgage valuation goal increases the possibility that the adopted valuation will lie further from the central tendency of the value distribution and thus be less than a best estimate. Where this occurs at the margins of prudent lending, desired loan-to-value lending ratios will be more likely to be exceeded, reducing the margin of borrower equity, which in turn figures prominently in the probability of borrower default (Vandell, 1993). Given the very large scale of mortgage lending in both the US and UK, the extent to which this reformulation of the valuation goal occurs and facilitation of this sort of behaviour modification are important areas of inquiry. This paper investigates these questions and pays particular attention to the role of client feedback.

Valuer/Appraiser Behaviour Modification and Client Feedback

In both the US and UK there is acceptance of a normative procedure to be employed when estimating value by the comparable sales method. This normative valuation procedure is explicitly developed and taught as part of the body of knowledge of the Appraisal Institute (1996) and required of all appraisers in the United States [Appraisal Standards Board, 1997, Standards Rule 1-4 (b) (iii)]. In the UK, the procedure to be followed is less explicitly laid down, although similar considerations are embodied in the mandatory valuation guidelines

definition of *market value* (Royal Institution of Chartered Surveyors, 1998, P.S.4.1, 4.1.3).

(Royal Institution of Chartered Surveyors, 1998).

Research, however, has shown that expert appraisers and valuers do not always follow the normative valuation process (Diaz, 1990a; Diaz, 1990b), especially when they are aware of the pending sale price (Gallimore and Wolverton, 1997). When subjected to client pressure, appraisers have demonstrated a willingness to alter value conclusions without justification at the request of large clients (Kinnard *et al*, 1997). Of course, feedback from clients can take a variety of forms and may or may not be directed at seeking to alter behaviour and cause deviation from the overt valuation objective. Nonetheless, it represents a potentially powerful influence, largely because of the relative absence of other forms of reliable feedback by which valuers and appraisers can assess their own levels of achievement. This is partly because the hypothetical true market value that the valuer or appraiser seeks to capture is effectively unknown. It is also due to the circularities that accompany the relationship between the mortgage valuation and the ultimate transaction price. Although correspondence between these two may appear to be a measure of valuation achievement, it frequently cannot be relied upon as an independent measure. The final price may have been affected by the valuation or the valuation may have been influenced by the prospective price.

The Lens Model of Perceptual Theory

The theoretical foundation for the study presented here is the lens model of perceptual theory (Brunswik, 1956)[4]. When viewed from a valuation perspective, the lens model provides a framework for both valuation judgement and the impact of client feedback (real-world experience) on perception of the mortgage valuation problem. The lens model is posited on the observation that people are rarely able to directly perceive objects in the environment (e.g., actually observe the notional transaction that underlies a definition of value). Rather, perception is modeled as an indirect process whereby a set of proximal cues is used to make inferences about a distal, criterion variable. In the case of appraisal judgement, the true market value of a subject property corresponds to the distal, criterion variable. Data concerning sales of

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4 See B. Brehmer and C. R. B. Joyce, Eds. (1988), for a fairly recent and up to date collection of essays and extensive references dealing with this topic.

comparable properties correspond to proximal cues.

According to the lens model, the perceptual system consists of two subsystems—the task system and the cognitive system. The task system represents a model of the environment, and the cognitive system represents a model of the person attempting to obtain an accurate perception of that environment (Doherty and Balzer, 1988). Cues are the "lens" through which a person perceives the environment. For this perception to be completely accurate, three conditions must hold. First, there must exist an environmental model capable of predicting the distal criterion with total accuracy. Second, the person has to possess a cognitive model that wholly corresponds to the environmental model. Finally, the person has to apply his or her model with total consistency. Unless these conditions hold, a person's achievement, expressed as the correlation between a variable in the environment and a person's judgements about that variable, (Balzer, Doherty and O'Conner, 1989) will be less than perfect.

The lens model provides a means of illustrating the task environment and cognitive system used in forming judgements regarding market values. Valuers and appraisers are trained to discern the relevance and irrelevance of cues and assessed on achievement in solving well-structured problems. Real world experience, however, differs from formal training. Real world problems tend to be ill-structured;[5] hence it is difficult to determine whether or not appropriate algorithms and cue weights were employed in their solution and assessment of achievement is not straight-forward.

In fact, in order to capture the processes at work in real property valuation judgements, a more complex lens model to that described above is necessary. This is because valuation by sales comparison is normatively a two-stage process where comparable sale selection judgement is followed by a market value judgement based on the comparable sale selections. Hence, the criteria in the first stage become cues in the second stage. (See Wolverton and Gallimore (1998)

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5 Simon (1978) identified three features that differentiate ill-structured problems from well-structured problems. Ill-structured problems have less definite goal attainment criteria, involve problem statements not containing all of the information required to solve the problem, and offer no simple means for discovering all of the possible alternatives at each step in the problem solution.

for a complete presentation of this more complex model.) A more complex task system will likely lower the predictability of the second stage criterion variable. Additionally, the more complex cognitive system will expand cognitive-system cue weight possibilities and lead to less consistency in the application of judgement. Knowledge of pending sale price (Gallimore and Wolverton, 1997) and the impact of client pressure (Roberts and Roberts, 1991; Kinnard *et al*, 1997; Smolen and Hambleton, 1997) may contribute to the inflation of cognitive system residuals, reducing the correlation between task-system and cognitive-system cue weights and, correspondingly, appraisal or valuation accuracy. The salient point is that the client's perception of success, communicated to appraisers through various means, may be absorbed so as cause appraisers and valuers to alter - or at least to report a judgement that differs from that generated by - their cognitive system.

Design of the Study

A survey questionnaire was designed to investigate the research questions emanating from the foregoing discussion. The questionnaire contained measures to gauge valuers' and appraisers' perceptions of their role; their perception of their clients' view of the valuation goal; and an instrument designed to capture the amount and form of client feedback that they experienced. Descriptive data were also collected on the respondents and aspects of their work environment.

The appraisers' and valuers' perceptions of the valuation goal (P1) were measured, in a Likert format, by their responses to the question:[6]

> From your perspective as a valuer, rate the role of the valuer in today's market for valuation services. Rate from 1 (disagree) to 7 (agree) the extent to which you agree with the following description of your perception of the role of the valuer.
>
> When doing mortgage valuation work, to validate the pending sale price.

Their perceptions of their clients' view of the desired valuation objective (P2) was similarly measured by their response to the question:

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6 The words valuer and appraiser, and valuation and appraisal, were interchanged as appropriate in the UK and US surveys

> With regard to conducting a valuation for the purpose of a loan to facilitate a purchase, are your clients more concerned with obtaining an objective estimate of market value or with obtaining a valuation that supports the sale price, thereby enabling them to make the loan? Rate the typical lender from 1 (concerned about objectivity) to 7 (concerned about supporting the sale price).

To examine the impact of client feedback, a ten-variable client feedback instrument (CFI) was designed to capture three outcome feedback constructs—environmental perception feedback (*F1*), coercive feedback (*F2*), and positive reinforcement (*F3*). Each CFI variable was rated by respondents in a Likert response format ranging from 1 (never) to 7 (always). The form of the CFI instrument was as follows.[7]

> In a situation where your client has ordered a valuation **for a loan to facilitate a purchase**, and your opinion of market value is **too low** to justify the loan amount, what forms of client feedback would you expect? (Rate from 1 to 7 the degree to which you would expect to experience each of the following.)
>
> *F1: Environmental Perception Feedback*
>
> > Client asks me if I am "comfortable" with the value
> > Client asks me to consider other comparable sales
>
> *F2: Coercive Feedback*
>
> > Client pressures me to increase the value figure
> > Client "mentions" the amount of work they send to me
> > Client threatens to send me less of their work
> > Client threatens removal from their valuer panel
> > Client removes me from their valuer panel
>
> *F3: Positive Reinforcement*
>
> > Client does not contact me regarding the value
> > Client is apt to send me more of their work
> > Client thanks me for helping them control risk

Data and Analysis

The survey was mailed to 1,200 appraisers in the US and 1,200 chartered general practice surveyors in the UK[8]. The US sample was proportionally selected at random from two sample

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7 The construct labels, shown in italics, were not included in the questionnaire.
8 There is no discrete professional organization in the UK composed entirely of persons whose work is wholly "appraisal". The majority of general practice surveyors, however, engage wholly or significantly in appraisal work.

frames consisting of members of the Appraisal Institute (13,095 appraisers) and of the national appraisal registry (79,112). The sample included 220 Appraisal Institute members and 980 non-Appraisal Institute members drawn from the appraisal registry. The UK sample was randomly drawn from a population of 17,799 chartered general practice surveyors working in England and Wales in non-public job appointments. Questionnaires were mailed to both samples in late 1997. In both instances the survey was administered according to the Dillman (1978) "total design method."

Of the 1,200 US questionnaires mailed, 14 were returned due to an incorrect address or the person no longer being actively engaged in appraisal leaving an effective sample size of 1,186. There were 378 usable responses, which equates to a 32% response rate. However, 11% of these indicated that they had not done mortgage loan valuations in the previous two years. Because this was set as a qualifying condition for valid responses to the CFI instrument and perceptual measures, the usable US response rate for the purpose of the analysis reported here was 28%. Of the 1,200 UK questionnaires mailed, 21 were returned "addressee gone away" and 91 responded by saying they were not valuers. From the remaining effective sample of 1,088 there were 511 responses returned (47%). The percentage of UK respondents who had not done mortgage loan valuations in the previous two years was much larger (coincidentally also 47%) than in the US. The usable UK response rate for the purpose of this paper was therefore 25%.

Results and Discussion

Table 1 contains descriptive data on the respondents by country along with comparisons of mean responses. The typical UK valuer is significantly younger (42.7 v. 48.8, $t = 6.99$), but also significantly more experienced (21.2 years v. 16.4 years, $t = 5.89$), than the typical US appraiser. The makeup of the appraisal profession is predominantly male, and it is significantly more so in the UK (92.7% v. 80.6%, $z = 4.26$). The UK valuer is also more apt to be engaged full-time in the profession (94.9% v. 85.7%, $z = 3.69$), but less inclined to be a firm owner (48.4% v. 59.4.5%, $z = 2.68$) and much less apt to operate as an independent contractor (2.2% v. 25.6%, $z = 7.99$). To this extent appraisal in the US is more characteristically a "cottage industry."

Table 2 summarises the amount of time spent on appraisal tasks, relative to other real estate functions. Generally speaking, the typical US appraiser spends relatively more time (compared to his or her UK counterpart) doing traditional "appraisal tasks," whereas the typical UK valuer spends comparatively more time on "nonappraisal tasks." For example, US appraisers spend significantly more of their time on residential appraisal than UK valuers (55.8% v. 32.6%, $z = 7.00$) although the difference in time spent on nonresidential appraisal (24.6% v. 20.2%) is not significant. The typical UK valuer spends significantly more time on nonresidential real estate brokerage (11.6% v. 1.1%, $z = 10.43$); on subsidiary activities such as office management (6.1% v. 2.3%, $z = 9.94$), consulting (4.2% v. 1.3%, $z = 2.76$) and market analysis (1.8% v. 0.6%, $z = 3.60$); and on other, non-specified tasks (4.7% v. 2.1%, $z = 5.29$). These differences paint a picture of a more diversified practitioner in the UK *vis-à-vis* the US appraiser counterpart.

The first measure to be examined is the appraisers' and valuers' perception of their role (P1). The mean score on this measure was 3.75 (s=2.07) in the US sample and 3.41 (s=1.90) in the UK. A mean score of less than 4 (neutral) on *P1* indicates that, on average, appraisers or valuers somewhat disagree with the statement that their role is to validate the pending sale price. The evidence suggests that, overall, both appraisers and valuers disagreed, although not strongly, with the view that their role is to validate sale price. In both the US and UK, however, less than half (41.9% and 46.9% respectively), however, *actually disagreed* with the statement (i.e. rated 1, 2 or 3). Slightly less than a quarter (19% in the US; 23.6% in the UK)) were neutral (rated 4). The remainder (39.1% and 29.5%) supported this view of their role (i.e. rated 5, 6 or 7). These results reflect widespread behaviour modification. A sizeable minority of both appraisers and valuers, taught that the goal is to assess market value and directed to do so by professional guidelines, nonetheless endorse an alternative interpretation of this goal.

The second stage of the analysis is to examine these differences in relation to feedback experienced from clients, since it is argued above that this feedback may modify appraisers' and valuers' perceptions of what they should be doing. The first form of feedback tested is of the vicarious kind that may occur when they perceive that their clients want sale prices validated; for example, because they believe that lender clients will blame them for an adverse lending

outcome. The extent to which clients are susceptible to do this would logically be related to their proper appreciation of the valuation goal. Clients who fail to recognise the independent, unbiased nature of the role are more likely to allocate blame when the reported figure results in overshoot of the maximum loan-to-value ratio. Conversely, appraisers and valuers who believe that their clients see validation of sale price as the valuer's objective may feel under pressure to minimise the occasions when they fall foul of this. They may be more likely to reframe the valuation goal. The posited relationship is thus between P1 and P2. In both samples there is a highly significant correlation between these two measures (US r=.420, p=.000; UK r=.279, p=.000).

The third stage of the analysis is that concerned with more direct forms of feedback. To test for this the results from the ten-variable CFI are examined (Table 3). In the US, the two most prevalent forms of lender feedback, in instances where the appraised value was too low to facilitate a purchase, were both environmental. "Client asks me to consider other comparable sales" had a mean score of 4.28, and "client asks me if I am comfortable with the value" had a mean score of 3.88. The next most prevalent form of lender feedback was in the coercive feedback dimension–"client pressures me to increase the appraised value" (mean = 3.39). Three positive reinforcers were fourth, fifth, and sixth most prevalent; followed by the remaining coercive feedback variables.

The pattern in the UK differed somewhat. Most prevalent was the positive feedback of no contact from the client[9] (mean = 3.79). Then came the environmental variables "client asks me if I am comfortable with the value," mean score = 3.70; and "client asks me to consider other comparable sales ," mean score = 3.45. These were followed by the remaining positive statements "client thanks me for helping them to control risk," mean score = 3.38; and "client is apt to send me more of their work," mean score = 3.34. In both samples, the tendency is for client response to be more commonly of the environmental or positive, rather than coercive, form. As between the samples, valuers in the UK are more likely to get thanked for controlling risk; whereas US appraisers more likely to be asked to consider other comparables. Both are

9 This response was characterised as positive feedback on the basis that "no news is good news."

equally exposed to pressure regarding the amount of work they get from clients, although appraisers appear significantly more prone than valuers to pressure regarding removal from lenders' panels. Overall, the significant differences that exist suggest that appraisers are more vulnerable than valuers to client influences that may subvert adherence to normative behaviour.

The CFI data were factor analysed[10] to uncover the underlying constructs. Table 4 shows how the CFI factored in the two samples. Within the US data, the analysis revealed three factors (as determined by the convention of excluding dimensions with eigenvalues less than one [Hair, *et al.*, 1992]). With one exception, this was broadly as designed, with each variable loading most heavily on its appropriate dimension. The exception is the "no contact" variable. It was hypothesized that this would load positively on the positive feedback dimension, reflecting the expectation that no news would be interpreted as positive feedback (receipt of an acceptable work product by the client). In fact, the "no-contact" variable loads most heavily on the environmental feedback dimension, but its negative loading results in a bi-polar factor. This juxtaposition of loadings is, however, logical, in that less frequent contact regarding value limits opportunities for the other forms of negative client feedback in the dimension. Standardized factor scores were derived for each of the modified CFI constructs: ($F1^{US}$) environmental perception feedback, ($F2^{US}$) coercive feedback, and ($F3^{US}$) positive reinforcement.

The solution for the UK data was factorially more complex. The CFI data produced four factors, although the fourth of these had only one salient loading (again on the "no contact" variable) and therefore should be treated as a unique variable rather than a factor or underlying construct. Otherwise the pattern of factor loadings generally aligns with that which emerged from the US data. The only difference occurs in the loading of the statement concerning client pressure to increase value. This correlates more strongly in the UK sample with other feedback directing the valuer to reflect upon the valuation. This suggests the first two UK factors are differentiated along task-oriented and business-relationship-oriented dimensions. Standardized factor scores were likewise calculated for the UK factors ($F1^{UK}$, $F2^{UK}$ and $F3^{UK}$).

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10 Principal Component Analysis was used and the resulting loadings rotated using the Varimax method.

A simple correlation analysis is used to model the relationship between the three feedback constructs and the perceptions of appraisers and valuers (Table 5). This reveals that, in the US, environmental perception feedback ($F1^{US)}$ shows highly significant positive correlations with $P1$ and $P2$ and coercive feedback ($F2^{US}$) has similar correlation with P2. Conversely, positive reinforcement of provision of objective opinions of value ($F3^{US}$) shows highly significant negative correlations with $P1$ and $P2$. The correlation signs are all consistent with the hypothesised relationships. In the UK the environmental perception (i.e., "task-oriented") feedback factor ($F1^{UK}$) has a significant correlation with $P2$. In other respects, however, the exposure of UK valuers to client feedback appears not to be associated with their perception of the mortgage valuation objective.

It is not obvious why this difference in outcome between the countries exists. It may arise because valuers are as a whole more intimately involved than appraisers in the different dimensions of the property market (Wolverton and Gallimore, 1999). Arguably, therefore, they are both exposed to feedback from a wider range of sources than that experienced by US appraisers and more sensitive to the needs of the different players in the market. Modifications in their role perception may therefore be influenced more by their affinity with these networks than by direct client pressure. If so, valuers whose work brings them into contact with other property market processes will arguably display greater willingness to support the smooth functioning of these processes – and be more inclined to reframe their valuation objective to one more conducive to the completion of a pending transaction.

To pursue this hypothesis with the UK sample, the scores on $P1$ were examined in relation to the range of work that valuers perform. This data was collected in the questionnaire survey by reference to the percentage of work effort over the previous two years spent on each of ten different kinds of task. The results are those shown in Table 2. Valuation, not surprisingly, is the predominant task; although the extent to which it was the primary task of individual respondents varied considerably. Only 21 of the UK valuers spent all of their time on valuation, 19 of whom did only residential valuation. The remainder identified their valuation work effort

at percentages varying across the whole range between 1% and 99%.

It has been argued (*supra*) that valuers who do little or nothing other than valuation will be more isolated from the impact of their advice upon others involved in the property industry than valuers who perform valuation in conjunction with other roles. Defining what is "little or nothing other than valuation" is of course subjective. Treating only those who for whom valuation is 100% of their work excludes those who claim to do 99% (n=4), 98% (n=4) and so on. Using a watershed criterion appears more logical. The figure of at least 90% of work effort on valuation was chosen for this purpose. In the samples utilised here, there is in fact a "break" in the percentage distribution around 90%: 55 cases fall between 90%-100%; only six between 81%-89%. These 55 were allocated to a "pure valuer" grouping and the rest into a "partial valuer" group. These groupings were created in order to test the hypothesis that "pure valuers" are more "isolated" and hence less inclined to see their role as to validate pending sale price[11]. Stated formally $P1^{PartialValuers} \geq P1^{PureValuers}$. In fact, the opposite is true. $P1^{PureValuers}$ mean score = 3.80 (median=4.00; n=55) and $P1^{PartialValuers}$ = 3.27 (median=3.50; n=210). The difference is significant at the 5% level (t = 1.865, one-tailed p=.032; z = 1.938, one-tailed p=.027).

The difference becomes highly significant when the pure valuer subgroup is examined by kind of valuation (i.e. residential; non-residential). The majority (42) fall into the residential category. The scores compared with those of the rest of the valuers in the sample are: $P1^{ResidentialPureValuers}$ mean score = 4.10 (median=4.00; n=42) and $P1^{OtherValuers}$ = 3.25 (median=3.00; n=223). The statistics are t=2.717, one-tailed p=.004; z = 2.807, one-tailed p=.003. Although these residential "pure" valuers clearly differ from the rest of the sample in their perception of the mortgage valuation objective, they are no more susceptible to client feedback, as there is no significant correlation between their P1 scores and the CFI constructs that emerged from the factor analysis[12]. However, members of this group's perceptions of the valuation objective (*P1*) are

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11 The decision to test this by comparing differences between groups rather than through correlation between valuation task percentage and scores on P1 was taken because the posited relationship was thought unlikely to be linear - i.e. the "isolating" effect uniformly graduated as the proportion of valuation work increases.

12 The correlations of *P2* were -.036 (*F1*); .276 (*F2*); -.187 (*F3*).

strongly positively correlated (r=.675; p=.000) with their corresponding perceptions of what their clients are seeking (*P2*).

Conclusion

In both the US and UK, substantial minorities (39.1% and 29.5%) of appraisers or valuers in the sample have modified their perception of the goal of a mortgage valuation. This is an important finding because it reflects support for a goal that is clearly different to that embodied in professional guidelines, with consequent implications for the valuation process that is pursued to achieve that goal. In part, this behaviour modification appears related to what valuers think their clients are actually seeking when commissioning mortgage valuations. In addition, the responses to the Client Feedback Instrument (Table 3) demonstrate that when the outcome of the valuation does not support the pending sale price, clients do provide feedback to appraisers and valuers. This feedback can be characterized as generally being "appropriate" (i.e., more environmental or task oriented), rather than coercive. Coercive feedback does occur, however, and this occurrence is more frequent in the US than in the UK. The factor analyses reveal that both appraisers and valuers make a clear distinction between environmental (or task-oriented) feedback and coercive (or business-relationship-oriented) feedback. The form of these dimensions differs slightly between the two countries. In the US, it aligns almost precisely with that predicted by the instrument design. In the UK, the task-business distinction is sharper. Correspondingly, "pressure" to increase the value conclusion has a slightly different character in the US compared to the UK.

The study demonstrates correlations between the types of feedback and perceived role, although it is only in the US that these correlations strongly support the posited link between the different forms of feedback and appraisers' perceptions of their goal in performing appraisals. This is consistent with client feedback causing appraisers to "re-learn" both their valuation objective and the relative importance of valuation task variables, through experience. In the UK, however, there is less of a link. It exists between task-oriented feedback and valuers' perceptions that lenders are most interested in obtaining valuations that support sale price. Other forms of client feedback, however, are not associated with this re-framing of the valuation goal. Nor do UK

valuers allow market affinity to influence interpretations of their goal. In fact, valuers with arguably least market affinity display strongest allegiance to "validate sale price" as the objective. As these valuers have developed greater familiarity with the task they may have become drawn to simplifying strategies, especially those which have the tacit or open support of their clients and appear to attract little real risk.

The differences that emerge between the US findings and those for the UK suggest that it is necessary to look beyond lender relationships for a full understanding of the effects of outcome feedback on appraisers and valuers. In both countries, however, it is evident that the valuation task environment and its associated pressures can result in experience-based learning. To the extent that these interactions are directing valuation problem solving behavior too far from the normative standard—which appears to be especially so in the US—intervention may be called for. At a minimum, it seems appropriate to alert appraisers and their lender clients to the potentially harmful effects of inappropriate client feedback. Additionally, lender clients may need to become more cognizant of the normative role of the appraiser and the valuation problem-solving goal implied thereby.

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TABLES

Table 1: Comparison of Individual Appraiser/Valuer Characteristics

Characteristic	US Mean (Std. Dev.)[2]	UK Mean (Std. Dev.)[2]	t-score[3] (p-value)	z-score[4] (p-value)
Age	48.8 (11.2)	42.7 (10.0)	6.99 (.000)	6.38 (.000)
Number of Children[1]	1.09 (1.2)	1.29 (1.2)	1.83 (.067)	2.20 (.028)
Appraisal Experience (Yrs)	16.4 (9.2)	21.2 (10.5)	5.89 (.000)	5.79 (.000)
Male (%)	80.6	92.7	4.48 (.000)	4.26 (.000)
Married (%)	79.6	83.2	1.12 (.261)	1.12 (.264)
Full Time Appraiser (%)	85.7	94.9	3.88 (.000)	3.69 (.000)
Firm Owner (%)	59.4	48.4	2.69 (.007)	2.68 (.007)
Independent Contractor (%)	25.6	2.2	9.01 (.000)	7.99 (.000)

[1] Number of children living at home.
[2] Standard deviations are not provided for categorical variables.
[3] Assumes either equal or unequal variance, whichever is appropriate, based on Levene's test.
[4] Approximation based on the nonparametric Mann-Whitney test.

Table 2: Comparison of Work Effort by Task

Task	Percent of Work Effort on Task		t-score[4] (p-value)	z-score[5] (p-value)
	US Mean (Std. Dev.)	UK Mean (Std. Dev.)		
Residential Appraisal	55.8	32.6	7.38 (.000)	7.00 (.000)
Non-residential Appraisal	24.6	20.2	1.96 (.050)	1.10 (.271)
Reviewing Appraisals	5.0	3.0	2.49 (.013)	2.59 (.010)
Litigation Support[1]	3.3	4.2	1.11 (.268)	4.41 (.000)
Office Management[2]	2.3	6.1	5.41 (.000)	9.94 (.000)
Residential Brokerage	2.6	5.3	2.39 (.017)	1.49 (.136)
Non-residential Brokerage	1.1	11.6	8.03 (.000)	10.43 (.000)
Consulting	1.3	4.2	4.20 (.000)	2.76 (.006)
Property Management	0.8	6.5	6.27 (.000)	8.47 (.000)
Market Analysis[3]	0.6	1.8	3.82 (.000)	3.60 (.000)
Other Tasks	2.1	4.7	2.71 (.007)	5.29 (.000)

[1] Includes expert witness.
[2] Appraisal office and personnel management.
[3] Includes market, marketability and feasibility studies.
[4] Assumes either equal or unequal variance, whichever is appropriate, based on Levene's test.
[5] Approximation based on the nonparametric Mann-Whitney test.

Table 3: Client Feedback Instrument (CFI)

Mean Responses

Variable (1 to 7 Likert scale)[1]	US Mean	UK Mean	t-score (p-value)	z-score (p-value)
Client asks me if I am "comfortable" with the value	3.88	3.70	1.41 (.159)	1.74 (.083)
Client asks me to consider other comparable sales	4.28	3.45	6.97 (.000)	6.67 (.000)
Client pressures me to increase the appraised value	3.39	3.32	0.53 (.596)	0.27 (.785)
Client "mentions" the amount of work they send to me	2.40	2.22	1.34 (.181)	0.64 (.522)
Client threatens to send me less of their work	2.06	1.72	3.02 (.003)	2.57 (.010)
Client threatens removal from their appraiser list	1.88	1.42	4.78 (.000)	4.61 (.000)
Client removes me from their appraiser list	2.24	1.32	8.93 (.000)	7.76 (.000)
Client does not contact me regarding the value	3.34	3.79	3.78 (.000)	3.64 (.000)
Client is apt to send me more of their work	3.36	3.34	0.05 (.960)	0.02 (.985)
Client thanks me for helping them control risk	2.87	3.38	3.71 (.000)	3.92 (.000)

[1] A response of 1= never, 4 = sometimes, and 7 = always.

Table 4

Factor Analysis - US Responses

Variable	$F1^{US}$	$F2^{US}$	$F3^{US}$
Client asks me if I am "comfortable" with the value	**.746**	.068	.324
Client asks me to consider other comparable sales	**.746**	.238	-.194
Client pressures me to increase the appraised value	.450	**.641**	-.210
Client "mentions" the amount of work they send to me	.227	**.833**	-.082
Client threatens to send me less of their work	.107	**.876**	-.059
Client threatens removal from their appraiser list	-.002	**.891**	-.069
Client removes me from their appraiser list	-.099	**.624**	-.274
Client does not contact me regarding the value	**-.502**	.095	.358
Client is apt to send me more of their work	-.099	-.147	**.763**
Client thanks me for helping them control risk .	002	-.215	**.789**
Eigenvalue	3.760	1.395	1.297
Percent of Variance	37.6%	13.9%	13.0%
Cumulative Percent of Variance		51.5%	64.5%

Factor Analysis - UK Responses

Variable	$F1^{UK}$	$F2^{UK}$	$F3^{UK}$	$F4^{UK}$
Client asks me if I am "comfortable" with the value	**.632**	.041	.242	.165
Client asks me to consider other comparable sales	**.778**	.061	-.094	-.061
Client pressures me to increase the appraised value	**.780**	.230	-.059	-.049
Client "mentions" the amount of work they send to me	.530	**.630**	-.094	.086
Client threatens to send me less of their work	.306	**.815**	.018	.055
Client threatens removal from their appraiser list	.096	**.882**	-.061	.090
Client removes me from their appraiser list	-.048	**.792**	-.068	-.093
Client does not contact me regarding the value	-.021	-.047	.032	**-.974**
Client is apt to send me more of their work	-.003	.023	**.860**	-.152
Client thanks me for helping them control risk	.028	-.116	**.853**	.117
Eigenvalue	3.212	1.626	1.265	1.030
Percent of Variance	32.1%	16.3%	12.7%	10.3%
Cumulative Percent of Variance		48.4%	61.0%	71.3%

Table 5: Correlation between CFI Constructs and Appraisers/Valuer Perceptions

US Data

Variable	P1	P2	F1	F2	F3
P1: Appraiser as price validator	1.00				
P2 Client's concern about supporting sale price	**.420**	1.00			
F1: Environmental Perception Feedback	**.246**	**.255**	1.00		
F2: Coercive Feedback	.140	**.323**	.000	1.00	
F3: Positive Reinforcement	**-.168**	**-.285**	.000	.000	1.00

Correlations in bold print are significant at better than the .01 level.

UK Data

Variable	P1	P2	F1	F2	F3
P1: Valuer as price validator	1.00				
P2 Client's concern about supporting sale price	**.279**	1.00			
F1: Environmental Perception Feedback	.123	**.207**	1.00		
F2: Coercive Feedback	-.005	-.020	.000	1.00	
F3: Positive Reinforcement	-.008	-.093	.000	.000	1.00

Correlations in bold print are significant at better than the .01 level.