# Equivalent Sampling The Valuation of Loss Claims with Limited Property Descriptions

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Personal property is frequently lost, damaged or destroyed by water intrusion, fire, conversion or other causes. Appraisals are required to achieve settlement for the loss. If the circumstances become litigious, two types of people can give testimony regarding value in California courts: the claimant that suffered the loss and a designated expert witness, usually an appraiser.

Frequently the subject property cannot be inspected. In some circumstances it is identified by a few descriptive words submitted by a claimant on a loss claim form. The identifications provided may or may not be sufficient to develop credible assignment results. Such assignments require careful judgment, and may require appraisal techniques that are different from those typically used when a subject property is inspected. Equivalent Sampling is a term coined by the author to discuss a technique used to value personal property under the circumstances described. This article discusses these issues and applicable requirements of the 2008 edition of the Uniform Standards of Professional Appraisal Practice (USPAP).

Equivalent Sampling applies to a personal property appraisal assignment in which:

- The subject property is not available for inspection, and
- the subject property identification is based upon descriptive words submitted by a claimant on a form, and
- some characteristics and attributes of the subject property are not described, and
- communication with the claimant is not possible or allowed, and
- the appraiser cannot gather more data from reliable sources.

Under such limiting assignment conditions the appraiser must proceed with care.

The appraiser's first task in all appraisal assignments is to define the appraisal problem. Problem Identification is covered in USPAP's Standard Rule 7-2. In general it states that the appraiser must communicate with the client in order to identify these assignment elements:

- Identify the client and intended users;
- Identify the intended use
- Identify the type and definition of value
- Identify the effective date
- Identify the characteristics of the property relevant to the type and definition of value and intended use including
- sufficient characteristics to establish the identity of the subject property, and
- the quality of the item, and
- other physical and economic attributes that affect value
- Identify the assignment conditions

The identification of the property and its relevant characteristics is best accomplished by personal inspection of the subject property by the appraiser whenever possible. However,

USPAP does not require in-person inspection. The primary reason for inspecting the subject property is to gather information about the characteristics of the property relevant to its value.

The appraiser should carefully review all receipts, past appraisals, credit card statements, sketches, photographs and other relevant documents submitted as evidence. In litigation support the appraiser should review relevant deposition testimony. If discovery is open, the appraiser can prepare questions regarding the subject property that can be posed by the attorney during a forthcoming deposition of a litigant. The identification of relevant quality characteristics and value-relevant attributes is a primary goal. If discovery is closed, the appraiser is confined to reviewing the documents submitted as evidence and past deposition testimony.

The literal identification of the subject property on a claim form serves as the basis for identification of the subject property and selection of the objects for inclusion in the Equivalent Sample. The appraiser must determine when the claimant's description, and what is known about a subject property, is sufficient to develop a value opinion relevant to intended use and the applicable definition of value. In some instances the appraiser must assert an extraordinary assumption to identify the property, or a relevant characteristic of the property, in order to develop credible assignment results.

• The appraiser seeks to identify the type of object, or the descriptive name of the object as it is typically called in the marketplace, as well as its quantity, age, materials used in construction, the maker, size, shape, color, signatures, marks, condition, unusual value characteristics and indications of quality. Such extensive information about the subject property, while desirable, is seldom described so completely on a loss claim. An indication of the quantity and quality is most important. USPAP allows considerable flexibility in determining the characteristics that must be identified in order to develop credible assignment results relevant to intended use.

The appraiser should be able to demonstrate an objective relationship between the subject property and the Equivalent Sampling chosen. When equivalency is established it becomes reasonable to assume that the quality characteristics and value-relevant attributes of the subject property, that have not been described and are unknown, are likely to be included or represented in the Equivalent Sampling. Webster's Dictionary defines equivalent as "equal in value." It is this assumption that establishes the mean and range of the sample as the basis for determining the fair market value of the subject property.

I propose that an Equivalent Sampling, competently selected, represents objective data from the relevant marketplace based on equivalent types of objects with similar or exact property descriptions and characteristics. The mean, or average, represents the best estimate for the value of a single unit. The range establishes an indicator of reliability and provides meaningful contextual data.

The Equivalent Sampling result should be repeatable within a reasonable confidence interval by an appraiser's peer. Ultimately the means of many equivalent samples, using the same search criteria, should produce a very tight bell-shaped curve that should have highly predictive confidence intervals. Such data over time should establish value patterns for ordinary property types that could be statistically analyzed to establish credibility.

In this article I discuss the USPAP standards that apply to Equivalent Sampling, and the theory and research methods that are applicable when there is incomplete description of a subject property that cannot be inspected. This article examines:

- Theoretical considerations
- Property identification issues
- Extraordinary assumptions and disclosures
- The Equivalent Sampling technique
- Examples of Equivalent sampling analysis
- Conclusions
- Disclosures

USPAP requires competency of the appraiser in regard to identifying assignment elements for problem identification, determining the scope of work, and in the development and reporting of assignment results. Appraisers should exercise care when accepting similar assignments and using the methods discussed in this article. The appraiser should be experienced, as a generalist or as a specialist, with the subject property and the market that is relevant to the assignment. In litigation support the appraiser should be prepared to act as an expert witness. The appraiser should always carefully consider the applicability and limits of the Equivalent Sampling method. Competency is essential to credibility.

### Theoretical Considerations

The American Society of Appraisers (ASA) in The Appraisal of Personal Property edited by Patricia C. Soucy and Janella N. Smith, has stated the identification related principles of value. There are three principles that underlie property identification and authentication (Soucy and Smyth, p. 14-15):

the Principle of Identification the Principle of Contribution the Principle of Qualitative Analysis or Ranking

## Principle of Identification

Authentication research is based on the Principle of Identification. A genuine article has certain identifying characteristics, traits or marks. If the identifying characteristics of a genuine article match the same characteristics as the subject property, the subject property is assumed to be genuine (Soucy and Smyth, 1994, pg 14).

To establish comparability or equivalency a similar connection must be established between the subject property description submitted by a claimant and the comparable or equivalent objects chosen by the appraiser as a reference for value analysis. Identity relates to specific characteristics by which an object is identified. It is those characteristics by which the identity of a thing can be established.

If the identifying characteristics of equivalent objects chosen for analysis match the characteristics of the subject property as described, the subject property is assumed to be equivalent to objects represented in the sample. It is the obligation of the appraiser to establish that the essential identifying characteristics that are typical of the subject property are imbedded in the equivalent sample and are sufficient for credible analysis.

The type of object is identified based on the descriptive term or description of the claimant. The appraiser seeks to understand the quality characteristics and value features typical of the type of object sufficiently to choose an Equivalent Sampling. The appraiser must establish the type of object and the sub classifications sufficiently to identify an Equivalent Sampling. A teapot must have a spout and serve the function of pouring tea. A bicycle must have two wheels and be capable of being ridden.

A guideline for the identification of property in general is established by the Getty Object ID which presents the generally currently recognized requirements of meaningful property description for many purposes, including appraisal, and describing cultural objects to identify them.

A clock can be a tall case, mantle, wall or bracket clock. There are further sub classifications such as calendar clock or quarter repeating carriage clock, etc. To the extent possible subcategories are important to establish for credible valuation. Each object type has important characteristics by which it is identified.

The credibility of the valuation using Equivalent Sampling is based on the sufficiency of the subject property identification or description provided. In some cases the stated identification may be extended by extraordinary assumption. The use of such assumptions is governed by USPAP considerations. Assumptions are only used when reasonable and appropriate for credible analysis.

A manufactured chest of drawers with machine-made dovetails differs from a pre-industrial revolution period chest of drawers with handmade dovetails and construction. The appraiser needs to know whether the subject property was a period antique or a machine manufactured example. The assumption that the subject property was an ordinary chest of drawers would make it reasonable to eliminate the period chest of drawers from the sample selected as equivalent. If the chest of drawers was described as handmade and 18th century by a claimant, then the manufactured examples must be eliminated from the equivalent sample. Ordinary period chests of drawers of the 18th century could then be selected for an Equivalent Sample if credible results could be developed.

## Principle of Contribution

The Principle of Contribution states that the value of a component part of a property is the amount it contributes to the value of the whole or the amount by which its absence detracts from the value of the whole. This principle recognizes that comparison between properties that are not exactly the same is possible, and that adjustments can be made. This principle allows the appraiser to evaluate and adjust for differences using appraisal techniques (Soucy, pg14). The phrase "value characteristics" can also be substituted for "component", and that allows for a broader application.

The Principle of Contribution does not typically apply to an "Equivalent Sampling" methodology since the characteristics that would typically be adjusted for differences have not been identified.

# Principle of Qualitative Ranking

When sufficient information is available the appraiser can tighten the likely value range of the subject property by using the Principle of Qualitative Ranking to determine the place, or rank, of the subject property within the range of the comparable objects. Comparable objects that are qualitatively better or more desirable are worth more, and comparable objects that have characteristics that are not as desirable are worth less.

Sometimes there is sufficient identification and a reasonable basis to make an assumption regarding a quality characteristic or value-relevant attribute that will result in credible assignment results using the Principle of Qualitative Ranking in order to restrict a value range or to come to a value conclusion.

When a subject property is not inspected, and characteristics such as the date of manufacture, model number, size, and condition are not identified, and only a property class or general object type is known, then the Principle of Contribution and the Principle of Qualitative Ranking are not usable to determine value. The Equivalent Sampling method may be applicable in such circumstances if the subject property is sufficiently identified for reasonable analysis.

# Property Identification Issues

An appraisal is needed for legal purposes and reasonable analysis. The intended use is to settle the loss claim. Intended users have turned to the appraiser to develop a credible opinion. The standard techniques of appraisers are not applicable when inspection is not possible and only a limited property description exists. The Equivalent Sampling technique is necessary, appropriate and relevant in such circumstances. Equivalency must be established between the subject property and the Equivalent Sample.

Relevant property characteristics are significant attributes, features or traits of the subject property that are relevant to value. USPAP allows significant flexibility in choosing the relevant property characteristics relevant to intended use. Some responsibility falls on the claimant to identify those characteristics when he or she submits a claim for the loss. The written loss claim establishes the subject property's identity when the property cannot be inspected. The burden is on the appraiser to identify the type of object sufficiently to develop credible assignment results.

There must be a "meaningful" identification of the subject property. Identification is the basis for evaluating comparability or equivalency. A definition of "identify" or "identification" in USPAP would be helpful, but does not exist. Webster's provides ordinary dictionary definitions of the following terms important to property identity:

Identify: To determine as a particular thing.

Identification: Anything by which the identity of a thing can be established.

Characteristic: Distinguishing or distinctive; typical.

Character: Any distinguishing or essential quality or property.

Identity relates to specific characteristics by which an object is identified.

USPAP's SCOPE OF WORK RULE applies to the "extent to which property is identified" as well as the extent of the research and analysis. In the report the appraiser must "describe information sufficient to identify the property involved in the appraisal, including the physical and economic property characteristics relevant to the assignment."

In the National USPAP 7-Hour Update Course, the Instructor Notes state that:

"Identifying the property is different from inspecting it. Inspection relates to identifying the relevant characteristics, not to "identifying" the subject property...identification of the relevant characteristics requires appraisal competence and is based on the judgment of the appraiser."

Appraiser competence is reflected in the identification of objects to include in the Equivalent Sampling.

Standard 7-2 (e) has specific requirements regarding the identification of the property and of relevant property characteristics:

"Identify the characteristics of the property that are relevant to the type and definition of value and intended use of the appraisal including:

(i) sufficient characteristics to establish the identity of the item including the method of identification.

(ii) Sufficient characteristics to establish the relative quality of the item (and to component parts, where applicable) within its type;

(iii) All other physical and economic attributes with a material effect on value.

Comment: Some examples... include condition, style, size, quality, manufacturer, author, materials, origin, age, provenance, alterations, restoration and obsolescence. The type of property, the type and definition of value and intended use of the appraisal determine which characteristics have a material effect on value" (bold added for emphasis).

An equivalent sample is based on a claimant's identification or description of a type of object only. Some specific relevant property characteristics that apply to the sub classification of subject property are frequently not described. Such characteristics are unknowable to the appraiser. Based upon the current and only identification of the subject property, that submitted by the claimant, the appraiser must sufficiently understand the type of object to identify the characteristics that have a material effect on value, and to choose which objects should be included in the Equivalent Sampling. The results of this analysis, if properly conducted, will establish an average, or mean value, that is equal to the value of the subject property, and will establish a meaningful value range for the property as identified.

Some types of objects, with minimum description, can be credibly valued using an Equivalent Sampling. Other descriptions submitted by claimants do not allow proper identification of the type of object, or of it's relevant characteristics, to use the Equivalent Sample method. Some search results are difficult to interpret. Ambiguity can undermine the method. Sometimes there are too many variables in the sample and the information provided is insufficient to select examples that are equivalent.

It is important to know the quantity claimed. The value of a single unit is based upon the mean value of an Equivalent Sampling. That value must be multiplied by the quantity claimed to establish the value of the loss. The quantity claimed, if not stated, must be established by assumption. Assumptions should not be arbitrary. Quantity can sometimes be assumed based on the cost claimed.

The appraiser must identify some measure of quality. This can be based on a brand name, a receipt or a claimant's estimate of current replacement cost or value. The appraiser can choose comparable properties based on a quality range consistent with the cost claimedfor the type of object, but care should be taken. The party making the cost or value claim may not know the replacement cost or value of the object. The loss claim could be exaggerated or

understated. However, unless there is compelling or direct evidence to the contrary, the appraiser should assume that cost or value estimate submitted is truthful, accurate and factual.

USPAP comments further in SR7-2e: Comment on (i)(vi):

"The information used by an appraiser to identify the property characteristics must be from sources the appraiser reasonably believes are reliable. An appraiser may use any combination of a property inspection and documents or other resources to identify the relevant characteristics of the subject property."

When adequate information about relevant characteristics is not available through a personal inspection or from sources the appraiser believes are reliable, an appraiser must withdraw from the assignment unless the appraiser can:

"modify the assignment conditions to expand the scope of work to include gathering the necessary information; or use an extraordinary assumption about such information, if credible assignment results can still be developed" (USPAP, 2008).

The key words here are "...if credible assignment results can still be developed." When credible assignment results cannot be developed for a particular type of object, then the appraiser must decline the valuation of that subject property using the Equivalent Sampling technique due to insufficient identification for valuation purposes. Some types of objects cannot be valued due to insufficient identification of sub classifications or important relevant characteristics. Sometimes a sample has such a large value range, or the integrity of the data is so suspect, that any opinion of value would be meaningless. Sometimes a meaningful connection cannot be established between a subject property description and types of objects in the marketplace.

### Extraordinary Assumptions And Disclosures

The property name or type, as claimed, must be sufficient to establish a meaningful connection to properties that are equivalent and that result in interpretable Equivalent Sampling. If not, the appraiser must develop an extraordinary assumption in order to develop a credible opinion or decline to value the property using Equivalent Sampling.

The claimant in a loss assignment has some responsibility to identify the type of object meaningfully. Exceptional characteristics that impart value or that establish a meaningful sub classification for the type of object need to be communicated by the claimant. If no special characteristics are identified, then it can be reasonably assumed that the subject property does not have exceptional characteristics. In most cases the property, unless noted otherwise, can be reasonably assumed to be ordinary. Such assumptions are allowed when properly disclosed.

Equivalent Sampling frequently represents the ordinary, or average, examples of the type of object claimed. These are the common items typically found in the homes, offices, garages and workshops of other households of similar socioeconomic groups and in the same geographic area. It is the ordinary objects, not the best and not the worst, that provide the basis to establish the most likely price at which comparable or equivalent sales most commonly occur in the relevant market.

USPAP defines an EXTRAORDINARY ASSUMPTION as,

"an assumption, directly related to a specific assignment, which, if found to be false, could alter the appraiser's opinions or conclusions.

Comment: Extraordinary assumptions presume as fact otherwise uncertain information about physical, legal, or economic characteristics of the subject property; or about conditions external to the property, such as market conditions or trends; or about the integrity of data used in an analysis."

Extraordinary assumptions about the property, or about the integrity of the market analysis are subject to USPAP Standard Rules. SR7-2 (f) requires the appraiser to:

"identify any extraordinary assumptions necessary in the assignment.

Comment: An extraordinary assumption may be used in an assignment only if: it is required to properly develop credible opinions and conclusions; the appraiser has a reasonable basis for the extraordinary assumption; use of the extraordinary assumption results in a credible analysis; and the appraiser complies with the disclosure requirements set forth in USPAP for extraordinary assumptions."

When facts are missing and extraordinary assumptions are employed as a substitute, the appraiser must disclose the assumptions. USPAP 8-2(b) requires an appraiser to "clearly and conspicuously state all extraordinary assumptions and hypothetical conditions, and state that their use might have affected the assignment results."

Some extraordinary assumptions apply only to a specific property. Others apply to the assignment as a whole. Specific extraordinary assumptions should be prominently disclosed in the relevant part of the report. The limiting conditions, extraordinary assumptions and disclosures that follow are typically necessary in assignments that use an Equivalent Sampling methodology.

### Typical limiting conditions:

- The subject property was not available for inspection by the appraiser.
- The subject property description by the claimant is the basis of object identification by the appraiser.
- Some object identifications submitted lack relevant data.
- The cost or value submitted by the claimant may not be accurate. The value could be higher or lower than the value or cost claimed.

#### Typical extraordinary assumptions:

- There exists an ownership interest, by an identified party to the matter, for each subject property.
- The description of the object that is the subject property is assumed to be accurate, factual and true.
- The subject property was in serviceable condition in regard to utility, with ordinary wear and tear only in regard to condition.
- The subject property was ordinary and without exceptional characteristics relevant to provenance, historical or scientific importance or rarity.
- Search terms used to create Equivalent Samples are assumed to result in the identification of subject properties that are equivalent, that represent the same

property type or category, and that have similar descriptive and value characteristics inherent in the object type.

• Unidentified subject quality characteristics and value-relevant attributes of the subject property are assumed to be present, imbedded or represented in the equivalent sample.

### Typical disclosures:

• The extraordinary assumptions disclosed in the report could impact the value opinion of the appraiser if not true or factual.

In some cases valuation may be based on only one or two comparably described objects from the relevant market. It should be noted that the larger the sample size, the more likely it is that the value characteristics of the subject property are included within the variance included in the sample.

# Equivalent Sampling Technique

The mean and range analysis has been used by appraisers for a long time. Equivalent Sampling is the term chosen by the author to describe a technique that also uses a mean and range analysis to establish value. The Equivalent Sampling methodology uses the sales comparison approach to value. Data searches are focused on the market and market level chosen by the appraiser based on the type and definition of value appropriate for the assignment and intended use.

### The Equivalent Sampling technique:

The appraiser gathers search results, usually from the Internet, using search terms identical or equivalent to the subject property as stated on a loss claim. Search results are sorted by highest first whenever possible. Sorting will allow the appraiser to identify value characteristics that drive the market. From the initial search results the appraiser selects completed sales or offers for sale to analyze as an Equivalent Sample. The sale or list price of each equivalent object selected for the sample is added to produce a total for the set and then divided by the total number of sales or list prices that were added. The resulting quotient represents the average or "mean" value of the sample. That value represents the applicable value sought as long at the sample was taken from the appropriate or relevant market and the sample reflects properties equivalent to the subject property. The lowest example and the highest example within the Equivalent Sampling represent the range. In some instances the appraiser may choose to disregard the lowest and highest example.

Equivalency to the subject property is reflected by the search terms that create the Equivalent Sample. Identical words are preferred, but in some instances words with similar meanings to those described on the loss claim are employed. Words that are typically employed by informed market participants are chosen rather than the words presented in the loss claim. For instance a property described as a "grandfather" clock may be researched using the term "tall case" clock. The use of alternative words may require an extraordinary assumption regarding the identification of the subject property. The search words employed should be documented in the work file along with the search results.

As in all assignments the appraiser must select the relevant market and market level that is appropriate to the type and definition of value and intended use. For ordinary properties frequently eBay® is a relevant market. Other markets may also be considered such as:

classified ads, object offerings in consignment or thrift stores, pawn shops, estate sales, local estate auctions, antique show or stores, and specialized dealers or galleries. However, eBay® offers evidence for many ordinary property types and frequently offers evidence of demand or lack of market demand. Liveauctioneers.com and proxibid.com also frequently provide meaningful data sources for Equivalent Sampling analysis.

Generic terms such as a "bike" or "bicycle" do not provide a sufficient identification for reasonable analysis using the Equivalent Sampling method. An object sub classification must be identified such as "mountain" bike or a "racing" bike.

A quick check on eBay® can be very instructive. For instance there were 91,969 items found using "bike" as a search term. Lets assume, for purposes of discussion, that the object claimed is a "mountain" bike. There were 5,653 items found under completed sales on eBay® using the search term "mountain" bike. The highest, with 39 bids, sold for \$2,700.00 and the lowest sold for \$15.00. There were bike parts, clothing, jewelry and other related items included in that search result. This large body of data does not lend itself well to analysis using the Equivalent Sampling method. The range is much too large and it includes new bikes. It is possible to find patterns in such large samples that can be instructive and show when patterns of sales begin to occur with some regularity, but it is time consuming to analyze so many search results, and it can be difficult to explain in the report.

If one adds the word "used" to the "mountain bike" search term, then the search results are limited to 47 items. Eleven of these items are mountain bikes, and they are known to be used, some only a "few times." Discarding the highest and lowest sales, the range of agreed selling prices for the mountain bikes that sold on eBay® was between \$50.00 and \$400.00. This range is meaningful and relevant. The mean is \$210. The mean represents the value, typically the fair market value, of a good quality and good condition used mountain bike using the Equivalent Sampling method.

Remember that we have established an extraordinary assumption that the subject property was an ordinary example. The exclusion of the discrepant highest value is reasonable in the context of this assumption. A tight value range is a good indicator of validity and reliability. It may also be important to list the number of properties that failed to find a willing buyer and remained unsold, and to indicate the range of prices at which the objects were offered, but failed to attract bids.

The actual search terms used to establish the Equivalent Sample should be documented. The search results using those search terms should be printed and retained in the work file, either digitally or as hard copy, in order to preserve evidence. Results do not remain long on the Internet. A reasonable mind should agree that the sample derived from the search terms used resulted in gathering a sampling that is equivalent to the subject property and reflective of the type of object and it's sub classification. This establishes a direct relation to the market place and objective evidence of sales agreements to support value.

# Examples Of Equivalent Sampling Analysis

Some property descriptions or identifications are sufficient for the appraiser to use traditional appraisal methods and to adjust for differences. Other property descriptions are too limited and require the use of other methods or techniques such as Equivalent Sampling.

Some subject property descriptions may be so insufficient that the appraiser must decline to value the property using an Equivalent Sampling. However, the appraiser, based on an

extraordinary assumption, may choose to carry over the value estimate of the claimant if it appears to be within a reasonable value range and supportable by general findings in the marketplace. It is a judgment call by the appraiser whether or not to carry over a submitted value claim, and alert intended users that the claim could be reasonable, but that the current description is insufficient for proof using Equivalent Sampling.

The following examples are included to demonstrate object descriptions with sufficient data for reasonable valuation using the "equivalent sampling" technique:

· "12 inch compound miter saw"

o No cost basis was claimed but sufficient identification data existed to create a sample with the same identified characteristics, but manufactured by different makers. Fair Market Value was established at \$100.00.

• "Dyson Vacuum" with a claimed value of \$464.00.

o Six Dyson vacuums sold on eBay® with a mean value of \$253.00; in an earlier assignment the mean of a sample of four Dyson vacuums was \$200.00. This illustrates that the use of the equivalent sample is not precise, but necessary, since we do not know the model number, age, condition and other characteristics that attach to the subject property. This example also illustrates that the method can be repeated to demonstrate reliability. For instance, while writing this paper I repeated the search. A different sample of three used Dyson vacuums had a mean of \$230.00.

• "Brass and Copper Fire Extinguisher" with a claimed value of \$270.00.

o An equivalent sample of 42 equivalently described properties that sold had a mean value of \$54.00.

• "Brighton: 10 Belts @ \$75, 4 pr Shoes @ \$150, 4 Purses @ \$275" all with a claimed value of \$2,500.00.

o Equivalent samples of each Brighton object type were developed; the total lot of belts, shoes and purses was valued at \$362 based on comparable sales on eBay® for each type; the largest sample was for 30 Brighton used purses with a mean value of \$48.00. The mean value of the sample for each type was multiplied times the quantity claimed for the type and the result for each type was added to estimate the Fair Market Value for the lot.

The following examples demonstrate subject property descriptions provided on property loss claims that this appraiser determined were not be appropriate for valuation using the Equivalent Sampling method due to insufficient data to establish a proper object type for sample selection and analysis. However, the following value claims are within a reasonable value range and the appraiser could alert intended users of this fact; under these circumstances the judge or jury could award the amount claimed since there is no basis to indicate that the claim is not credible. In fact the actual value could be higher.

• "Antique bottle collection" with a claimed value of \$500.00.

o The quantity, bottle type and quality is unknown as well as other relevant characteristics such as condition, age, color, size and marks; the basis for sample inclusion is difficult to establish. However a single bottle could be worth the total claimed.

• "Antique American flag" with a claimed value of \$200.00.

o Age and number of stars unknown; it is unknown if the flag is sewn, embroidered or printed.

• "Coin collection" with a claimed value of \$800.00.

o Deposition testimony indicates the coins are silver and commemorative, but there is no indication of denomination, country, mint mark, date, quantity or condition.

• "Teddy bear collection" with a claimed value of \$500.00.

o Quantity, maker and age are not known; on Dec. 15, 2007 there were 27,123 teddy bears listed on eBay® under completed sales. There was insufficient data to interpret research findings and select a comparable sample. However the value claimed could be reasonably credible.

Occasionally there is only limited market data available, such as one or two equivalent properties that are consistent with the appraiser's expectations but not conclusive. In such a situation there is insufficient market data to establish an Equivalent Sampling. The basis for the value opinion cannot be demonstrated through range and mean determination. The appraiser is at risk. In such cases the burden is on the appraiser to justify the decision to appraise or not appraise a subject property.

The choice to "carry-over" a value claim is not directly relevant to this article. It is mentioned since it is not contrary to typical practice in similar assignments and it demonstrates objectivity.

## Conclusions

Communication with the client is required to identify the appraisal problem and determine the scope of work for assignments in which:

- The subject property is not available for inspection, and
- only a limited object descriptions exists, and
- some relevant quality characteristics and value-relevant attributes are not described, and
- communication with the claimant is not possible or allowed, and
- the appraiser cannot gather more data from reliable sources.

Under such limiting conditions the appraiser must proceed with care.

When an object cannot be inspected, the subject property identification is based on the written words submitted by the claimant. That is the only method of identification possible if there are no photographs and inspection is not an option.

When specific quality characteristics and value-relevant attributes have not been identified and are in fact unknown to the appraiser, the Principles of Contribution and Qualitative Ranking have limited application, and typical appraisal methods are not adequate to solve the appraisal problem. Other techniques become necessary such as the development of an Equivalent Sampling. An Equivalent Sampling consists of objects selected by the appraiser based on equivalency with the subject property description submitted. The search terms used to establish the Equivalent Sample should be identical or equivalent to the identification of the subject property by the person submitting the claim. Those items that are not comparable or equivalent are eliminated from the search results by the appraiser. The appraiser determines the mean value and range of the Equivalent Sample. When properly used this technique is objective, market oriented and repeatable and provides a meaningful basis for credible valuation.

Intended users should be able to determine that the Equivalent Sampling chosen by the appraiser is comprised of objects equivalent to the subject property. The characteristics that are typical of the subject property as identified, should be represented in the sample chosen as equivalent. An appraiser's peers who examine the evidence in the sample should agree that the sample is equivalent to the subject property.

Careful consideration of USPAP requirements will help the appraiser in applying the Equivalent Sampling method. The use of this methodology must lead to meaningful assignment results in the context of the applicable value definition and intended use for each subject property and for the appraisal. The burden of proof is on the appraiser to ensure that assignment results are worthy of belief by intended users.

The Equivalent Sampling method, when properly conducted, is objective and results in credible valuation. The results of the appraiser's investigations should be repeatable and verifiable, and within reasonable confidence intervals. If there are two appraisers, each representing an opposing side in a litigated matter, and each appraiser used the Equivalent Sampling techniques, the results should be reasonably close, especially in regard to the summary amount of the fair market value. Differences could result from an appraiser's decision to carry over a claimed value, to variance in the chosen Equivalent Sampling, or to specific decisions to not value subject properties or other reasons. However, it is the position of the author that the results, as a whole, should be consistent.

The type of appraisal assignment described and discussed in this paper requires competence to identify applicable assignment elements, to employ the proper techniques and analyses and to comply with USPAP requirements. The appraiser should be competent with the property types that are included as subject property and be knowledgeable or experienced with the relevant market. The appraiser should be competent to fulfill the requirements of performing as a designated expert witness.

### Disclosures

The USPAP interpretations and applications expressed herein represent only the opinion of the author, a current Appraiser Qualification Board (AQB) Certified USPAP Instructor, and do not represent approval or endorsement by the Appraisal Foundation (TAF), the Appraisal Standards Board (ASB) or the AQB.

This theoretical discussion of the Equivalent Sampling method is intended for educational purposes only. It is not a "how to" article. Any use of Equivalent Sampling in an appraisal assignment is a professional choice and comes with all the risks associated with professional liability. The author disclaims all responsibility for reliance by any party on the methods discussed.

### REFERENCES

The Appraisal of Personal Property, Principles, Theories, and Practice Method for the Professional Appraiser, Soucy, Patricia C., FASA, and Smyth, Janella N. ASA, Washington DC, American Society of Appraisers, 1994.

National Uniform Standards of Professional Appraisal Practice (USPAP) Course, Instructor Notes, 7-Hour Course, Washington DC:The Appraisal Foundation, 2006

The New International Webster's Concise Dictionary of the English Language, Trident Press International, 2000 Edition.

Uniform Standards of Professional Appraisal Practice, The Appraisal Standard Board, The Appraisal Foundation, Washington DC, 2008.