**E6**      **Contextual Considerations for Evidence Collection and Testing Decisions: A Conceptual Framework for Investigators, Analysts, and Attorneys**

*Ted R. Hunt, JD\*, Jackson County Prosecutor's Office, Jackson County Courthouse, 415 East 12th Street, Fl 7M, Kansas City, MO 64106*

After attending this presentation, attendees will be familiar with a framework of heuristic factors for analyzing and interpreting the contextual significance of items located at a crime scene.

This presentation will impact the forensic science community by providing a framework with which to help facilitate logical and relevance-based evidence collection and testing decisions by investigators, analysts, and attorneys.

The term "context" may be defined as "that which surrounds, and gives meaning to, something else." In forensic science, an item's evidentiary context consists of the presence or absence of a probative relationship between the item and a criminal act. Depending on the facts of a particular case, this relationship may be direct and explicit, circumstantial and inferential, or a combination of each. For purposes of this discussion, a candidate object, article, or substance under consideration for forensic collection or testing will be referred to as an "item."

Many times, the critical foundational question of a crime scene item's contextual significance is bypassed or ignored. This may stem from investigative efforts that increasingly emphasize testing an ever-larger number of collected samples. The result is a technology-based, high throughput approach primarily focused on the question of source determination. This practice can be characterized as *forensic question begging*–drawing an inference of significance from a *testing conclusion* that includes or excludes a particular individual *absent* preliminarily establishing the *contextual probative value* of the item from which the test result was obtained.

To avoid such fallacious reasoning, an essential foundational question must be asked: Given the sum of the collective situational circumstances surrounding the item and the extrinsic information about the item provided by the victim(s), witness(es), and suspect(s), can a reasonable inference be drawn that will support the conclusion that the item is or is not related to the criminal activity being investigated? In some cases, the answer will be obvious; in others, that will be far from the case. It is for this reason that a conceptual framework for analyzing and interpreting evidentiary context is helpful.

The analysis of evidentiary context is composed of three distinct levels of significance: Level I, the intrinsic attributes of the item and its surrounding contextual circumstances at a crime scene; Level II, extrinsic information about the item provided by the victim(s), witness(es), and suspect(s) that tends to establish, enhance, diminish, or destroy its Level I significance; and, Level III, the presence or absence of an associative relationship between the item and a relevant person, place, or other crime scene item determined by forensic testing. This includes the statistical significance of a match, if any, that gives the item its evidentiary weight.

The ten Level I factors involved in contextual evidentiary analysis are: (1) the item's **Environment**, be it open or closed; (2) whether the item is **Native or Foreign** to the environment; (3) the **Nature** of the item, such as blood, semen, saliva, hair, or tissue; (4) the **Location** of the item, relative to other relevant persons, places, objects, or substances; (5) the **Relation** of the item, either direct or circumstantially inferred, that *connects* it to other relevant persons, places, objects, or substances; (6) **Action**, an inference of movement, force, or velocity associated with the item; (7) the **Quantity** of the item, meaning its relative abundance or scarcity at the scene; (8) the **Rarity** of the item, meaning its commonality or infrequency in general or in the crime scene environment; (9) the **Portability** of the item, meaning its transferability or fixity; and, (10) the **Condition** of the item, meaning the ability to reasonably infer the general period of time it has been present at a crime scene based on an examination of the item's external and/or internal characteristics and properties.

Level II of contextual evidentiary analysis is extrinsic to the item. It concerns assertions, omissions, or denials by the victim(s), witness(es), and suspect(s) regarding items recovered at a crime scene. A witness' assertion about an ostensibly insignificant and prosaic item located at a scene can *transform* it *into evidence*. Likewise, a witness' statement about an item apparently possessing strong Level I significance can relegate it to the status of a meaningless crime scene artifact. Level II assertions, omissions, and denials have the ability to enhance, diminish, or entirely eliminate the prior analytical interpretation and significance of the Level I factors.

Level III of contextual evidentiary analysis concerns the testing conclusion and statistical weight, if any, attached to a match. Any item recovered from a crime scene, depending on the facts of the case and analysis under Levels I and II, has a certain starting quantum of contextual significance prior to forensic testing. Forensic testing may then "individualize," "match," "include," be declared "inconclusive," or "exclude" a particular individual, object, or substance. Additionally, the item may be qualitatively or quantitatively insufficient to answer the question posed. Although a testing conclusion alone will not alter the preexisting contextual significance of the item analyzed, the probative value of that item, as an aspect of contextual relevance, can be exponentially enhanced or diminished.

The usefulness and applicability of the foregoing three levels of contextual analysis by investigators, analysts, and attorneys will be discussed. It is desired that these factors will help promote logical, relevance-based, and targeted evidence collection and testing decisions.

*\* Presenting Author*

**Evidence, Context, Collection and Testing**