

ADDENDUM

Research questions regarding bloodstain pattern classification

OSAC Bloodstain Pattern Analysis Subcommittee

March 1, 2021

Introduction

This document serves as an addendum to the OSAC Research Needs Assessment Form entitled “Method Development for *Bloodstain Pattern Classification*” established by the Bloodstain Pattern Analysis Subcommittee. The BPA Subcommittee is of the opinion this addendum provides additional details not captured in said form.

What are the problems?

- 1) A written method for the classification of bloodstain patterns does not currently exist.
- 2) Different people (of similar competence/experience) may give different classifications for the same pattern.
Evidence: CTS proficiency tests/casework testimony. Black box studies.
- 3) The inter and intra pattern variability is high: two impact patterns may exhibit as much variation as an impact pattern compared to an expiration pattern.
Evidence: BPA course exercises/personal experimentation/casework examples
- 4) The descriptions of patterns are sometimes/often a description of the mechanism. The decision-making process employed for pattern classification is not well established: while classifying a pattern, objective, measurable characteristics should direct the analyst into the correct classification.
Evidence:
ASB Technical Report 033 Terms and Definitions in Bloodstain Pattern Analysis, First Edition 2017
BPA language used in terminology

Why do we care about these problems?

Accurate classifications form the foundation for reliable opinions, which are vital to a fair outcome in court.

What are the research questions?

- 1) How do BPA analysts currently classify patterns?
- 2) What terms or data descriptors are needed to describe relevant bloodstain characteristics?
- 3) What are the significant characteristics of individual pattern types that are relevant to pattern classification?
- 4) Which criteria are necessary and/or sufficient to establish the mechanism(s) by which a pattern was created?
- 5) How much variation is there in classifications among different BPA analysts?