



# Finding the here in where: Keatley's Winthroping in missing persons and no-body homicide cases

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## ABSTRACT

No-body homicide cases are typically difficult to investigate, owing to the lack of forensics and leads. Researchers in the fields of forensics, criminology, and psychology have attempted to provide assistance to these investigations through their respective disciplines. The focus of the current case study review is on a combined approach to assisting in no-body homicides and cold cases. The proposed approach will outline a geographical profiling technique that has previously been used in no-body homicide investigations, Winthroping. Alongside this, forensic linguistic analyses will be outlined to show how a combination may provide fresh leads and investigative avenues for further exploration. A series of 4 real-world cases in which bodies were moved, dumped, and hidden by a suspect, who subsequently revealed knowledge of the clandestine grave are given. The aim is that readers from related fields and disciplines might synergistically collaborate to develop the area and further help in these cases.

## 1. Introduction

*Sometimes when answering “where” a body may be, we should look closely at the language used, for the answer may be hidden here.*

Of all the cases that investigators are tasked with, those in which the victim is missing are often the hardest to solve. Without a body, a crime scene is not always apparent, indeed it may not exist if the missing person (MisPer) is actually alive. This creates a difficult hurdle to overcome. Prosecuting no-body homicides (NBH) can be difficult [1–4]; always in the mind of the jurors is the possibility that there is no victim, there is no crime – the MisPer is alive. In contrast, families of victims cannot rest until their loved one is found, and case progression without a body often stalls. Several recent publications have attempted to assist investigations into missing person and no body homicides [1,5,6]. More recently, forensic linguistic approaches have been applied to suspects' statements, with the aim of highlighting deception or missing information [5,6]. The aim of the current review is to add to this growing trend by combining two of the leading areas in MisPer/NBH cases: geographical profiling techniques and forensic linguistics. In providing this review, it is hoped that researchers and practitioners in the area begin to collaborate and develop the methods and analyses using a multi- and transdisciplinary approach. The synergy between forensic

scientists may provide new investigative leads that hopefully secure convictions and help find where bodies are hidden.

There are many geographical profiling techniques that have been developed by researchers and applied practitioners [7–10]. Indeed, entire books have been written on the topics and a full review is beyond the scope of this paper. One method, however, lends itself well to integration with forensic linguistics: Winthroping [11,12]. While Winthroping was originally developed in the 1970s in the United Kingdom, it has received somewhat of a revival in recent years as international research groups have attempted to redevelop it and apply it to clandestine grave locating and MisPer cases [13]. Winthroping will be outlined in the first instance to provide readers with an overview of the approach and its historical and current uses. Leading on from this, the spotlight will then be given to forensic linguistics analyses (FLA). Much like geographical profiling, there are many FLA approaches that researchers have developed [14,15]. The key issue here is that FLAs are not being used solely to discern deception or honesty, instead, it will be shown that by looking closely at a suspect's language, the words they chose, and the indicators they reveal, clandestine sites may be revealed. The paper will, therefore, finish with a number of case studies wherein adopting this approach (a forensic linguistic Winthroping combination ~ termed Keatley's Winthroping) can or could have been used in real

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world cases.

## 2. Winthroping

Information about the history and concept of Winthroping is relatively hidden and obscured. There are several small documents accessible online by open-source intelligence (OSINT) activities; but any official attempt to attain the information through freedom of information has been turned-down. Therefore, researchers have largely had to guess or reverse-engineer the process [13,16]. What is known about Winthroping is that it was developed by Winthrop, a member of the UK Army. The core concept of Winthroping, in as much as we know, is relatively simple. To understand where a person would hide an object (e.g., cache, treasure, trophy, souvenir, improvised explosive device) we must think where we would hide that object and if the hider is interested to return to the crime scene for control purpose or to recover it [17]. Seemingly simple in its form, it has nonetheless been successfully adopted by various intelligence agencies, military personnel, search and rescue groups, law enforcement organisations, and detection-centred services (e.g., arson investigations).

Recently, researchers have attempted to provide a more theoretical basis to understanding Winthroping and how it may work [13]. Keatley et al. [15] suggested a number of criminological and psychological underpinnings. The aim is to improve the predictive accuracy of putting oneself in the position of the hider such that when we attempt to retrace their steps, we follow similar cognitive processes. Indeed, several psychological factors and processes have been suggested to underpin Winthroping. Saliency and affordance are perceptual factors that may influence decisions on which site to choose. Features of the environment may 'stand out' for a variety of reasons. More recently Keatley and O'Donnell [16] showed that geocachers – a group who share many of the behavioural and psychological processes of hiding and finding caches, stated that a number of environmental features were salient in their decision making. For criminals, signs like neighbourhood watch or CCTV may be salient deterrents. Other natural features may be salient to criminals as navigational waypoints. Keatley and O'Donnell [16] indicated that irregular trees, rocks, or features of pathways may be salient. Once a salient feature has been noted, the key next step is how the criminal interprets those features. Keatley et al. [13] suggest that certain features give *affordances* that criminals can use to navigate back to a location, if required. This may explain how serial killers can return to their dumpsites many years after originally using them – they are retracing their own salient features and affordances.

Of course, in much the same way that it is suggested investigators put themselves into the mental state and decision-making process of the criminal, a part of this is reflective, too. The criminal, in choosing a location may consider the likelihood of being caught while travelling to or returning there. This higher-order awareness of other individuals' mental states has been researched as Theory of Mind [18] in psychology. Keatley and O'Donnell [16] suggest that deceptive behaviours associated with the locations may indicate the skillset and forensic awareness of criminals. The evaluative process that criminals may pass through is bounded by their cognitive capacity, rationality, and time restraints. Therefore, Keatley et al. [13] suggested that criminals progress to a stage of satisfying – choosing a location that is the best possible option under the restraints of time, energy, and bounded rationality. Notwithstanding, investigators should remain aware of the fact that a criminal may have been acting more impulsively without premeditation, choosing a location on a smaller number of variables and factors, with less ability to qualify or disqualify locations based on extensive reflection. Investigators should try to understand the decision-making process of the suspect, and a pathway to doing that is by listening carefully to their word choices and statements [18]. As Somma and Costa [19] highlighted in their research, the choice of a site for concealment may not be random, but instead reflect the concealer's mental map. The selected sites are usually familiar, well-known to the concealer, and near

reference points that can aid with re-location of the site. Somma and Costa [19] note several important features and characteristics of these sites. These can assist investigators with locating clandestine locations. The current research suggests a further addition to the excellent list compiled by Somma and Costa [19] could be to include a linguistic analysis of the concealer's statements.

From a forensic point of view, other well-researched and supported theories can be used to help understand site location choice. Detection avoidance, for example, affects the decision of where to drop, dump, or hide an object. Of course, criminals are also affected by other considerations: like the ease of travel to the location. This is especially true if they wish to return to the scene/corpse as some do [13]. The weighing-up of these considerations has been researched in the literature in terms of rational choice theory [20,21]. While not all criminals may engage in high-calibre, analytical decision making, the act of removing an object (body, souvenir, cache) and hiding it somewhere else indicates a certain amount of decision making has occurred. It is suggested here that the thought processes correlated to the aforementioned psychological, geological, and environmental factors may later be reflected in the word choices suspects use, and with careful examination and consideration, investigators may get important investigative information about possible locations of victims [15].

Classic geographical profiling clearly has a role in Winthroping, and perhaps most importantly, the area of Crime Geometry and Crime Pattern Theory [10,22]. Humans navigate their regular geographical world by grouping locations into known patterns. Aside from individuals whose job it is to memorise every road and local maps (e.g., taxi drivers, long haul truckers), most individuals group their personal map in terms of "home," "work," "leisure," and "shops." These locations are referred to as activity spaces [10]. The localised neighbourhoods around these areas are relatively well-known, but the various routes between them typically follow well-trodden, repeated pathways. More recently, this approach to geographical profiling has been used to re-investigate cold cases [23]. Berezowski et al. [23] developed convex hulls – irregular polygons to map the overall activity space of a person and then begin considering whether the person should be elevated as a suspect. Somma [17] recently described the space and time of criminal behaviour of four famous serial killers, on the basis of criminal and geographical profiling. Winthroping takes this a step further by considering the meaning of locations, routes between them, and whether a site fits within the likelihood of being chosen. With this in mind, the current paper suggests a further step forward, to examine the word choices and language of suspects, to see if they re-live their pathway through their words and reveal (intentionally or through language slips) where a hidden site may be.

## 3. Methods

The pursuit of the truth has been a longstanding research topic in criminology and psychology disciplines for many years [14,24]. While various methods, analyses, and nuanced approaches have been developed, it appears researchers are not notably closer to accurately detecting deception than they were decades ago [25,26]. Indeed, a common conclusion is simply that deception detection is not possible, and most individuals perform around chance level [14]. Recently, Richards and colleagues [5,6] have used a forensic linguist approach, Statement Analysis, to analyse a number of statements in relation to MisPer and NBH cases. The results are complex and yield sequences of linguistic indicators that do appear to vary between different cases. This sequential approach to deception detection has been attempted by others in the literature [27–29]. A limitation remains that the output from the analyses are typically complex and difficult to interpret [30, 31]. The issue is that researchers may be replacing the opaqueness of deception detection with the impenetrability of complex analyses that are uninterpretable in a real-world, real-time setting. Whether deception detection will ever reliably score significantly above chance is no small

issue, but it is not germane to the current research. What is required, here, is another use of forensic linguistic analysis, specifically, looking for slips or leakages in language that may reveal hidden information.

In verbal communication, linguistic slips are relatively well-known and documented [32–35]. These slips or leakages may be a manifestation of deeper underlying sexual urges (e.g., Freudian slips), as most people have heard of them. Or perhaps it is an innocent slip, derived from absent-mindedness or distraction by other (intrusive) thoughts or cognitive load [15,36]. Sometimes, however, the slip may not be quite as innocent as we imagine. One cause of linguistic errors and slips is cognitive overloading and fatigue [37]. Let us return to the issue of hidden, clandestine sites. In these cases, criminals that have hidden something know what they have done, it is on their mind. When giving a press release or interview, therefore, the suspect must keep the known information hidden while attempting to appear natural for someone in that situation, speak freely, and not say the thing that is central in their mind. Except for very skilled, or very scripted individuals, people in these situations are likely to say more than they mean to [15,38]. Bringing together everything discussed so far, research is showing that combining a Winthroping approach with forensic linguistics may provide novel leads in investigations [15].

### 3.1. Keatley's Winthroping

To separate this amalgamation of geographical and linguistic analysis from traditional Winthroping, Keatley [15], who first developed the combined approach, it is suggested that it should be named *Keatley's Winthroping*. This is to ensure that any limitations of the combined approach are not unfairly placed on Winthrop's initial version of the method. To show the potential benefit of the combination, a series of case studies will be outlined below. Expectation management is key at this point, as it is in real-world investigations. It is not being suggested that the key to finding clandestine sites has been found and therefore we can open every case to find a clandestine site. This is not the silver bullet to solving searches. The aim is to elucidate a new approach with the hope that researchers involved in the fields become interested and collaborate with law enforcement and investigations.

#### 3.1.1. Chris Watts (USA)

In 2018, police attended the Watts family home after reports of a missing wife/mother and her two children were made. Shortly after arriving, police located Chris Watts, the husband/father of the MisPers. Police were immediately aware of the strange behaviours Chris Watts performed. Walking the neighbourhood to “*clear my head*” (rather than look for his missing wife and kids) was perhaps the first indicator that he was not wise with his words. In a press interview, Watts made a number of comments that in retrospect had another meaning. Watts told reporters, several times, that he imagined his children coming home and “*barrelling in*”. This phrase, by itself, is nothing too sinister, except for how and where the kids were found. Watts in an interview also claimed that he had “*no idea where she is, or the kids*”. Note that he separates the wife from the kids. It would be linguistically fine and simple to say “*they*” (e.g., “*I have no idea where they are*”). Given the stress of the situation and the need to convey the message quickly, it is questionable why Chris Watts felt the need to separate them (note, it is quicker to write “*them*” than “*his wife and kids*”). The answer came soon after when they were found in separate locations. These are, of course, not definitive indicators of guilt. Alone they are relatively trivial statements that may also be used by innocent people. In an investigation, however, sometimes a seemingly innocuous loose thread may be all that is required to unravel a sequence of statements that lead to the truth. The point being, typically in MisPer investigations, detectives perceive the possible locations of a MisPer as being expansive. Reducing the search parameters or focusing on specific locations may offer new insights. It may also help investigators to re-interview suspects to see if further slips are made. As Keatley and O'Donnell [16] suggest, maybe using

Winthroping as a psychological profiling tool could also help profile those who are more likely to make meaningful linguistic slips.

#### 3.1.2. Sarah Ervin (USA)

In 2020, police were responding to a missing child report of Maliyah Bass. Maliyah's mother, Sarah Ervin, attempted to persuade the police and television audience that she was doing all she could to help find her child. Many people with a guilty conscience will do all they can to persuade the audience (police, community, viewers) that they are innocent. Often, however, the focus is on themselves, rather than the missing person [15,39]. Indeed, research has shown that many guilty callers have a positive linguistic disposition (LD) towards themselves and a neutral or negative LD to the actual victim [39]. It is always worth considering whom the focus of a call or statement is, and what the LD is towards that person. While we must allow for individual differences, idiosyncrasies, and oddities, it is still worthwhile considering what we expect in MisPer cases. Winthroping, remember, is built on the concept of putting ourselves into the mindset of the offender; so when listening to statements, the same approach can be used, albeit cautiously. Imagine if Maliyah Bass were your daughter and had gone missing. Who would be the primary focus of your concern? What is the most salient information that is important for the audience to know? We expect concern for the MisPer. We allow self-recrimination and guilt if the speaker feels they should have done more. Care should be taken here to separate guilty feelings from guilty knowledge [15]. In the current case of missing Maliyah, her mother did have some salient information on her mind. From a Winthroping perspective, Sarah knew exactly where Maliyah was, because she was the one who left her there. From a forensic linguistic perspective, she could not help but let her positive linguistic disposition towards herself show. This came together in the following statement: “*I am drained, I have been looking for her for 24 hours.*” Who is the primary, salient focus of this statement? Of course, being tired may be expected, but there are multiple synonyms for tiredness or fatigue. Though linguistically acceptable and syntactically correct, *drained* also has a geographical, physical meaning. Maliyah was found soon after in a local storm drain. Of course, Keatley's Winthroping might only narrow the search to storm drains – still an extensive area; but, not as expansive as the entire state or country.

#### 3.1.3. Ian Stewart (England)

In 2016, emergency services in England, UK, received a MisPer call concerning Helen Bailey. Ian Stewart, her partner at the time, made a lengthy call to emergency services to report Helen missing. Emergency calls are often termed the first interview, as it is the first semi-official interaction between a person and law enforcement services. In terms of satisficing, guilty callers have competing psychological processes. They must appear calm enough to get the staged information across clearly, while being emotional enough to sound realistic. They must provide the information that verbally stages the crime scene effectively, without obviously misleading the investigation and drawing suspicion on themselves [39–41]. On top of this, they must withhold their knowledge of what they did and where a person is, while claiming they do not know. In the case of Ian Stewart, his lengthy call gave several indicators that could be analyzed from a Keatley's Winthroping perspective. When asked if he knew why Helen, his partner, may have left unannounced, he replied that she stated she needed “*space and time alone.*” Note the order of information. Order indicates salience and importance to an individual [38]. According to Ian, his partner primarily needed space. This might lead us to wonder if she felt trapped in somewhere small. From a Winthroping perspective, we might ask whether this is figurative or physical? When asked where Helen could be, on multiple successive occasions Ian mused that they owned a property, and she may be “*down there.*” In fact, he repeats *down there* four times across the interview – making it the only geographically related information about Helen's possible location. Therefore, if Stewart were a suspect and Keatley's Winthroping approach were taken,

investigators may be directed to look for a closed, confined, small space somewhere down or underneath. Investigators found Helen in a septic tank under their garage.

#### 3.1.4. Richard Satchwell (Ireland)

On March 20th, 2017, Tina Satchwell allegedly went missing while her husband was out at the shops. Her husband, Richard, made several public press releases and even appeared on radio stations to provide information to ostensibly help find his missing wife. Press releases, like emergency calls, can often provide key information because a suspect does not feel the pressure of a formal police interview and investigation. One statement Richard made soon after he reported his wife missing had some potential indicators of withheld information. First, Richard made his marriage seem long and harmonious, “28 years we’ve been together and 25 years married, and it’s just completely odd. It’s just completely thrown me.” Again, by itself, a relatively innocuous statement that does not confirm guilt and should not be used to bias investigations prematurely. There are, however, many ways a person can tell us they are surprised, shocked, or confused. Richard used a physical term, *thrown*. This was not the only time in the short statement he referred to physical movements in a downward direction, “she asked me to drop over ...” and “I found her keys on the ground” and “everything just fell away” and “she’s gone down ... so I’ll go down to visit ...” We saw previously what “down” meant for Ian Stewart. If we take the hypothesis that Richard, as a potential suspect, is implicitly leaking knowledge that Tina is somewhere ‘down,’ then we may ask what this means for her return. Remember, Richard is trying to convince us that she has left, the opposite or reverse of this is to come back. Therefore, we might expect Richard to use the words ‘come back’ to refer to how Tina will return. At the point he made this statement, Tina was only missing – she may well have “come back.” Instead, Richard told us, “I still believe she’s still just going to turn up, the same way she disappeared.” First, *turn up* is of course linguistically acceptable, but it is the opposite (up) of his repeated ‘down’ statements. Therefore, to come back, Tina must *turn up*. Furthermore, if we take the hypothesis that she has been put somewhere down, then her disappearance is downwards and the only way she would come back is if that same way is reversed. Essentially, the movement of her disappearing is the same route or way as her appearing.

Beyond the drama of television masterminds, most real-world criminals do not want to outright lie [15,38]. Strategically this makes sense, from a risk-reward/rational choice theory perspective [42]. Telling a lie may be critical if the truth is revealed, therefore it is better to avoid lying wherever possible. This is why many deceptive people may use vague language, word changes, and omission of information. In terms of Keatley’s Winthroping, if we hypothesise that Richard knew where his wife was, but did not want to say that, while also not wanting to lie, then he had few options. That may be why, when Richard told us where Tina is not he could not clearly say it: “... when I returned ... she just wasn’t there.” He could have said she was not at home. He could have made it clear she had left the house. Instead, he could not say this – he could not clearly say she was not at home, so we should not say or infer it for him. The word ‘home’ was substituted for ‘there.’ If a suspect cannot tell us she is not at home, we cannot presume she is not at home. While suspicion may certainly have fallen on Richard, he was not arrested and continued to live his life while his wife was missing. Of course, all of these potential indicators are not proof of guilt and great care should be taken not to become biased by suspicion. Innocent people can make what appear to be linguistic leaks, and part of Keatley’s Winthroping is to evaluate this. Even taken together as a cluster, these leaks or slips are not proof of anything more, perhaps, than the need to look further into the investigation and possible locations. When a case turns cold, new leads can revive interest and perhaps locate the victim. In this case, Tina was not found for over 6 years. Then, in 2023, Tina was found down beneath the stairway, in the house she and Richard had lived in. In 2023, Richard was arrested and charged with her murder.

## 4. International cases and training

The current cases are based on Western, English-speaking suspects. The premise of Keatley’s Winthroping can also be applied to international cases of different languages, with some important caveats. The way individuals use language, and thus may have slips or verbal leakages is not language dependent; however, the way we interpret the language may be. For example, the classic case of the ransom letter directing money to be left by the ‘devil’s strip’ could cause confusion and misleading analysis. Some forensic linguists may pay more attention to the “devil” component of the location, perhaps linking it to death or even satanic cults. In reality, it was simply a localised dialect in some states in USA and refers to the curb strip or area next to the sidewalk (also called a ‘pavement’ in England). This highlights the importance of looking beyond simple leakage or slips and combining it with a Winthroping approach – localised, specialised knowledge and awareness. Keatley’s Winthroping has also been applied and developed in the International Cold Case Analysis Project (ICCAP), a multi-department, multi-university teaching and training applied group, championed by Karsten Bettels [2].

Training individuals in Winthroping, forensics, and clandestine grave locations is something that is paramount to the further development of the areas [2,15,43]. Several police departments and university groups have begun collaborations that are showing promising leads already [2,43,44]. Novel teaching practices like flipped classrooms can also help with developing skillsets and applied understanding [43]. The benefit of Keatley’s Winthroping is that it can be taught and developed, as shown in a recent publication wherein ‘lay experts’ showed advanced skills in the Winthroping techniques [16].

Of course, Winthroping and even Keatley’s Winthroping may only take an investigation so far. Short of the suspect giving a detailed account, map, or taking investigators to the clandestine site, the method may only give approximate locations or types of locations. This is where advanced mapping and scanning techniques may be useful [19,45–47]. For example, Somma and colleagues [19,43,48] across several publications have been developing Geographic Information System (GIS) approaches to scanning wider areas for clandestine graves. It may be that Keatley’s Winthroping outlines a type of place a body may be hidden, and GIS approaches further narrow down the search [19,49], perhaps using the Red-Amber-Green (RAG) prioritization approach. Indeed, Somma et al. [45] highlight the possibility of this approach. In their seminal research, a simulated clandestine grave was made and then computer systems evaluated a wider search area based on a number of criteria (e.g., access/exit suitability, diggability, human made structures). This prioritization of locations based on various factors has been suggested by other authors, too [17,50]. It may be that adding Keatley’s Winthroping to this list could further prioritize locations. The reverse is also true – once a body is located, then interviews and statements can be analyzed to see if any suspect has made a statement (verbal slip or leakage) that matches the crime scene. Of course, further investigation would be required to corroborate such leads, but as with the cases highlighted above, this could lead help with investigations.

## 5. Conclusions

These are just a handful of cases wherein suspects have made statements that later turned out to reveal geographical locations. The important next step is to investigate the extent to which this is happening. This is where synergistic collaboration is key to do this fairly and on a larger scale. It is certainly not the case that every MisPer can be revealed through linguistic leakages of guilty individuals. So, research should begin to profile when, why, and how such statements are made. Media and emergency calls appear to be more represented in the current dataset, possibly owing to the non-confrontational style of the interaction. It may also be that the immediacy of the emergency call or media interview means the truth (the location of the MisPer) is more salient in



the suspect's mind. Of course, beyond MisPer and NBH cases, Winthroping and thus Keatley's Winthroping can be used in other criminal activities, including arson, burglary, and trophy caches.

Bringing together forensic scientists, alongside criminologists and psychologists could help to develop profiles of suspects based on their language and linguistic slips. Further areas of exploration may involve the type of suspect or victim, or whether the length between reporting the MisPer and making the statement affect the number or type of slips or leaks. These are questions that are clearly important for investigations, and are answerable, if enough researchers and practitioners collaborate to develop our understanding. Alongside this, a taxonomy of terms could be developed – perhaps ranking those that are more indicative or meaningful. Forensic scientists and crime scene examiners may help to bridge the gap between geographic profiling and real-world investigative resources and examinations. It is unlikely that research will ever get to the stage wherein hearing a word leads directly to a clandestine site. In many MisPer and NBH cases, though, investigators are desperate, either facing no leads or a search area that is prohibitively large. We, as academics, should be careful not to offer false hope of questionable leads, but providing new hypotheses based on empirically driven data is a path worth progressing.

### CRedit authorship contribution statement

**David A. Keatley:** Writing – review & editing, Writing – original draft, Validation, Methodology, Formal analysis, Data curation, Conceptualization.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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