

# Psychological Mechanisms and Impacts of the Identifiable Victim Effect

Zhengyou Zhou<sup>1\*</sup>

<sup>1</sup>Faculty of Science, The University of Sydney, 2006 Sydney, NSW, Australia

**Abstract.** The divergence between human responses to specific individual pain and the dilemma of large anonymous groups remains a major paradox in behavioral science. This sympathy asymmetry is driven by the identifiable victim effect (IVE), in which people provide more help to concrete, identifiable entities than abstract statistical groups. This literature review integrates basic behavioral theory and recent advances in neuroscience to explore the complex psychological landscape of IVE. Analysis shows that this phenomenon is fundamentally rooted in dual process cognition, serving as an emotional heuristic operation in System 1, while analytical thinking (System 2) paradoxically suppresses altruistic impulses. In addition, neuroimaging suggests that identifiable victims activate the 'social brain', particularly the temporoparietal joint and medial prefrontal cortex, and statistical data is processed through cold analysis hardware. By examining boundary conditions such as diminishing sympathy and victim responsibility, this article emphasizes the fragility of human empathy. Ultimately, to reconcile the biological drivers of individual compassion with the global necessity of collective action, it is necessary to utilize analytical thinking and emerging technologies to successfully expand the boundaries of the social brain.

## 1 Introduction

The divergence between human responses to the pain of specific individuals and the plight of large anonymous groups constitutes one of the most important paradoxes in behavioral science [1,2]. This phenomenon is known academically as the Identifiable Victim Effect (IVE), which describes the general tendency of individuals to provide more help and emotional investment when victims are viewed as concrete, identifiable entities rather than abstract members of statistical groups [1]. In public discourse, the phenomenon of "Baby Jessica" best illustrates this point: a child trapped in a well can stimulate the attention and resources of an entire country, while millions of children dying from preventable but "invisible" diseases are still a statistical abstract concept that cannot elicit comparable emotional responses [3,4]. This 'sympathetic asymmetry' indicates that the moral compass of humanity is not calibrated based on the degree of pain, but rather based on the resolution of the image presented to consciousness [2,4].

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\* Corresponding author: [zzho0757@uni.sydney.edu.au](mailto:zzho0757@uni.sydney.edu.au)

The significance of IVE goes far beyond the scope of charitable impulses; It permeates into the cornerstone of public policy, legal judgments, and healthcare resource allocation [1]. Legislative changes are often catalyzed by tragic narratives of identified individuals, such as the eponymous "Megan's Law," rather than a calm analysis of comprehensive crime data [1]. This indicates that there are systemic loopholes in democratic governance, with "anecdotal politics" often taking precedence over "evidence-based politics". Although IVE has undeniable mobilization power, it brings profound ethical challenges. This shows that human compassion is not allocated based on the size of needs, but rather on the vividness of the narrative and the psychological proximity of the victims [1,3]. The moral cost of this bias is enormous, as it leads to a 'utility gap' where resources shift from high-impact interventions to interventions that only resonate emotionally [3].

This article explores the complex psychological landscape of IVE. It argues that while this effect is a powerful catalyst for prosocial behavior, it is rooted in cognitive heuristics and emotional shortcuts that often lead to 'ineffective altruism' [3,5]. By combining basic behavioral theory with recent advances in neuroscience and meta-analysis trends, this article describes the mechanisms that maintain this bias, from dual process cognition to neuropsychological psychologization, and questions the boundary conditions that limit its impact, such as 'compassion fade'. Ultimately, this article aims to reconcile the biological drivers of individual empathy with the global necessity of collective action.

## **2 Theoretical foundations: the conflict of heart and head**

To understand why human cognition prioritizes singular over plural, it is necessary to study the integration of cognitive psychology and behavioral economics. The theoretical framework of IVE is based on three main pillars: dual process theory, proportional advantage, and psychological distance mechanism.

### **2.1 Dual-process theory and the affect heuristic**

The core of IVE is the dual process theory, which divides human cognition into two different modes of operation: System 1 (intuition, emotion, and speed) and System 2 (thoughtful, analytical, and slow) [2,4,6]. The identifiable victim effect is essentially a byproduct of System 1. When faced with a specific victim - including name, face, or personal history - the brain triggers an "emotional heuristic," in which emotional "markers" are used as a quick source of information for decision-making [2,4]. This heuristic approach is a cognitive shortcut that allows observers to bypass the "computational cost" of resonating with the crowd and instead focus on the individual's direct, heartfelt reality [2].

Bergh and Reinstein's [5] study emphasizes that empathy is not a holistic structure, but a process regulated by the tension between these two systems. Although System 2 can rationally conclude that saving 100 lives is mathematically superior to saving one life, System 1 is moved by the individual's "vividness" [4]. Importantly, Small et al. demonstrated that introducing cautious, analytical thinking (System 2) typically acts as a "wet blanket" that suppresses the emotional spark needed to drive altruism [2]. In this study, participants who were encouraged to engage in computational thinking reduced their donations to identifiable victims without increasing their contribution to statistical data [7]. This indicates that the 'computational mindset' is not only neutral, but also actively alienates moral intuition, creating an 'empathy gap' where more deliberation corresponds to less emotional response [7].

## 2.2 Proportion dominance and the reference group

The second fundamental concept is 'proportional advantage', which indicates that individuals are more motivated by the percentage of reference groups that can be saved, rather than the absolute number of lives [1,2,4]. For example, the psychological utility of saving 10 out of 10 people (100% success rate) is significantly higher than that of saving 10 out of 1000 people (1% success rate) [1]. This phenomenon reveals a flaw in human "moral mathematics": people seek satisfaction with "complete" solutions rather than the utility of incremental solutions. A confirmed victim will essentially create a reference group consisting of (n=1) [1,2]. By helping that specific person, the donor achieved 100% resolution of the problem in immediate awareness [1]. This creates a sense of 'perceived impact' where aggregated data cannot be replicated. Meta-analyses confirmed that this perceived efficacy - a feeling of contributing to clear "overall" differences - is the primary mediator of identifiable victim effects [1,8]. When the victim is a statistical data point, the donor feels like a "drop of water in the ocean", but when the victim is identified, the donor feels like a "savior", which drives the vast majority of individual charitable actions.

## 2.3 Vividness, narrative, and psychological distance

IVE is also intricately linked to the constructivist level theory (CLT) and the concept of psychological distance. Statistical victims are interpreted as having a high "remote" level - they are abstract, uncertain, and distant in time [8,9]. In contrast, the identified victims are 'proximal' - specific, explicit, and immediate [3]. This closeness is not only spatial, but also emotional; The identified victims exist in the 'moral present', while the statistical victims exist in a 'theoretical future' [3].

The vividness of the victim's identity helps bridge this psychological gap. Liu and Yang argue that narrative persuasion promotes "transportation," in which the observer becomes so immersed in the victim's story that the boundary between self and others becomes blurred [10]. This cognitive transport enhances empathy and reduces the cognitive load required to handle aid needs. Once transferred, the observer no longer evaluates the request for help from an analytical perspective, but rather through simulating the victim's painful experience, making the impulse to give almost reflexive rather than selective [1,2,4,8].

## 3 Psychological mechanisms: neural and cognitive drivers

Although early academic research focused on behavioral outcomes, in the past decade, there has been a surge in neuroscience exploration of the causal factors behind IVE. These findings suggest that preference for individuals rather than collectives is not only a socialized preference, but also a deeply ingrained neural bias that reflects the evolutionary history of tribal organisms.

### 3.1 The social brain and neural mentalizing

The most important progress in this field involves the study of "psychologization", which refers to the brain's ability to attribute psychological states to others. Zhao et al. demonstrated using functional magnetic resonance imaging technology that identifiable victims triggered significantly higher activation in the temporoparietal junction (TPJ) and medial prefrontal cortex (mPFC) compared to statistical victims [8]. These regions are signs of the 'social brain' that evolved to manage face-to-face interactions within small groups.

When observing a recognized individual, the brain automatically engages in Theory of Mind (ToM), simulating the victim's inner pain as if it were a direct social encounter. On the

contrary, statistical data is processed in the posterior parietal cortex, which is associated with mathematical calculations and abstract reasoning, rather than social empathy [8]. This indicates a fundamental neural 'mismatch': social hardware is used to process individuals, while cold analytical hardware is used to process groups [8]. Due to the closer connection between the social brain, amygdala, and reward center, individuals trigger an action-oriented response that cannot be achieved by data points.

### **3.2 Expected regret and the responsibility effect**

One cognitive mechanism that has recently gained attention is the concept of 'expected regret'. Studies suggest that part of the reason for IVE is fear of future emotional states after failure. Due to the specific nature of the identified victims, the "cost" of inaction is easily imaginable [3,4,6]. If a specific child dies due to the withholding of funds by a donor, then this regret is personal, sharp, and narrative-driven. Donors can imagine the specific consequences of their choices, thus generating a profound sense of moral responsibility.

However, when there is no donation to the general 'statistical fund' for disease prevention, a sense of responsibility spreads throughout the entire population. This 'responsibility effect' ensures that when victims have a face and a name, people perceive the moral burden to be much heavier [2,3]. This indicates that human motivation often comes not from the pleasure of giving, but from the relief of avoiding guilt. For identified victims, guilt is concentrated and inevitable, while for statistical victims, the 'bystander effect' takes root, making individuals believe that another entity or institution will ultimately solve the problem.

## **4 Societal impacts and applications**

The identifiable victim effect is not just a curiosity in the laboratory; It is a powerful force that determines the allocation of global resources and the structure of legal and healthcare systems.

### **4.1 Charitable giving and the "poster child" strategy**

In the non-profit field, IVE is the engine behind the "poster children" marketing strategy [1]. By using a single individual to represent a systemic crisis, organizations utilize the "singularity effect" to maximize donations [6]. However, this effect is fragile. Slovic found that even if a second victim is added to the fundraising appeal, donations will decrease by 15-20% [4]. The presence of the second person shifts the focus from a single 'other' to a 'group', which triggers category processing rather than empathy processing.

This has sparked an ethical debate about 'charity pornography', which involves using extremely painful images to trigger immediate donations. Caviola et al. argue that although this approach is effective in the short term, it may lead to long-term "donor fatigue" and may oversimplify complex systemic issues in these narratives [3]. When a single story is solved, it often creates a false sense that the crisis itself has been resolved, allowing potential causes to persist in the shadow of the chosen success story.

### **4.2 Public policy and "anecdotal legislation"**

In the public domain, IVE often leads to 'anecdotal legislation'. Laws are often passed after high-profile tragedies involving a victim [1]. Although these laws address the direct trauma of the identified individuals, the 'statistical victims' caused by this policy are often overlooked.

For example, laws passed to address specific crimes may result in mandatory minimum sentences, affecting thousands of people who do not belong to the original narrative [1].

This 'legislative myopia' may lead to a large-scale misallocation of public funds. Spending \$1 billion on safety regulations triggered by a highly anticipated accident could potentially save two lives annually, while spending the same \$1 billion on routine public health measures could save thousands of lives. However, political will almost always points towards identifiable reasons, as policy makers, like voters, are influenced by System 1 bias [11]. The ability to cover one million pieces of life data in one story remains the core challenge of rational governance.

### **4.3 Healthcare and the rescue mandate**

In the field of medicine, IVE leans society towards "rescue medicine" rather than "preventive medicine" [1]. This is commonly referred to as a 'rescue mission', which assumes a moral obligation to save specific individuals who are currently dying, regardless of the cost incurred. Society is often willing to spend millions of dollars to save diagnosed patients in need of experimental transplantation, but it hesitates to spend the same amount on hypertension screening because, statistically speaking, this can save hundreds of lives [1].

This creates a form of 'compassion inequality', where the visibility of patients determines the quality and urgency of care [1,4,12]. Rare diseases with famous spokespersons usually receive more funding than common diseases that affect marginalized and invisible people. This indicates that in the healthcare market, the ability to tell stories is equally important as the severity of the disease. The ethical challenge lies in balancing the human need to save individuals with the social need to protect populations.

## **5 Discussion: boundary conditions and ethics**

Although IVE has great power, it is not an absolute rule of behavior. Recent research has shifted towards "boundary conditions" - scenarios where the effects weaken or reverse - revealing the fragility of human empathy.

### **5.1 Compassion fade and the "arithmetic of compassion"**

The main challenge faced by IVE is the decline of empathy. As the number of victims increases from one to two, emotional arousal and willingness to help continue to decline [4,6]. Slovic argues that this is because human "emotional hardware" is not scalable [6]. When the transition from individual to group occurs, the brain shifts from emotional processing to category processing, leading to a state of 'mental numbness' [4,6].

This numbness is an important obstacle to addressing global crises such as climate change or mass atrocities. If only one person can feel empathy, then it becomes impossible to respond to the pain of millions of people. Slovic believes that this has led to a fundamentally broken 'sympathy arithmetic' [6]. As the number of threatened lives increases, sensitivity to these lives decreases. This 'moral exhaustion' explains why society can feel angry about a local tragedy while being indifferent to global genocide.

### **5.2 The double-edged sword of responsibility**

Recognizability only works when the victim is seen as 'blameless'. Small et al. pointed out that if an identified victim is responsible for their plight, such as a smoker in need of a transplant or an uninsured person facing medical debt, IVE can actually reverse it [2]. In this

case, the vivid details of the victim's life enable the observer to identify specific "errors" in the judgment, thereby triggering the "just world hypothesis". In this cognitive framework, observers belittle victims to alleviate moral discomfort [13]. People generally believe that 'bad things only happen to people who make wrong choices'. This indicates that recognizability is a double-edged sword; It can be humanized, but it can also provide specific data points needed for stigmatization. Being identified is being exposed, and for many victims, this exposure leads to judgment rather than assistance.

## 6 Conclusion

The identifiable victim effect remains one of the most influential biases in human decision-making. By combining the dual process theory with neuroscience evidence, this review suggests that the human brain is "born" to respond to single, vivid narratives. The activation of TPJ and mPFC confirms that identified individuals are viewed as social entities rather than data points. Fundamentally, humans are a species designed for villages rather than global networks.

However, this neural tendency comes at a cost. In the era of global crisis, the inability to expand empathy can lead to "spiritual numbness" and neglect of the intangible masses. The challenge facing society in the 21st century is not to suppress natural empathy towards individuals, but to use systems 2 thinking to bridge the gap in efficiency empathy. With the advancement of artificial intelligence-driven media and virtual reality technology, future research must determine whether "digital recognizability" - using technology to personalize statistical data - can ultimately teach the human heart to care for many people like caring for one person. Ultimately, the goal is to expand the boundaries of the social brain, including millions of people who can never be satisfied, and turn 'statistical data' back into 'people'.

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