

# Bleed as Intrapersonal Conflict: Understanding Bleed Management and Resilience as Parts of a Homeostasis Recovery Process

**Abstract:** This paper will make an argument for how the instability and imbalance that are associated with bleed experiences can be explained with the theory of physiological and psychological homeostasis. It will cover how the different parts of the established homeostatic model have logical counterparts in role-playing bleed theory, with particular emphasis on bleed management skills and integration practices. Through showing how bleed can be viewed as a form of intrapersonal conflict, the paper aims to further the existing theoretical framework around the concept with an additional aim of supporting the development of robust tools for measuring the impacts of bleed in the future.

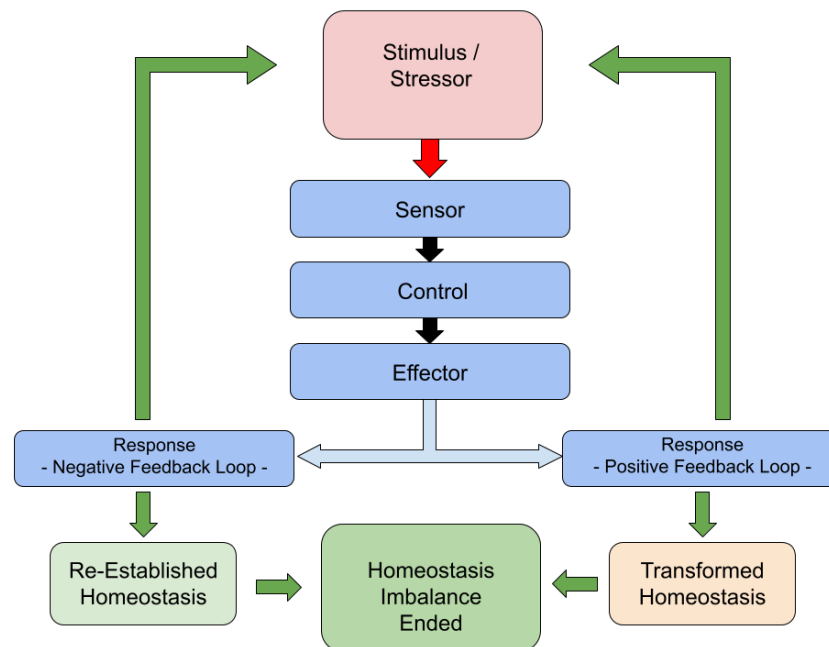
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## 1. THE CONCEPT OF HOMEOSTASIS

In biology, the term *homeostasis* (Cannon 1932) is used to describe a state of steady internal physiological conditions within an organism (Betts et al. 2022). Easily recognizable examples include body temperature and fluid balance. Maintaining homeostasis directly influences how an organism functions and interacts with the world, and as such it is a crucial part of its ability to survive. An outside influence that pushes an organism out of homeostasis is known as a *stimulus* in biology and a *stressor* in psychology.



**Figure 1:** A Simple Homeostasis Process Cycle by the author based on Betts et al. (2022).

Psychological balance is dependent on physiological homeostasis, but the relationship between them is also dynamic, and we can measure direct physiological effects on the body when we are exposed to psychological stressors (Betts et al. 2022). Similarly, physiological imbalances also influence our psychological well-being. A well-known and relatable example is how we might become more irritable if we are hungry or suffering from a lack of sleep.

## 2. NEGATIVE AND POSITIVE FEEDBACK LOOPS

When the organism chooses a response that aims to counterbalance the stressor, it is called a *negative feedback loop*. An example can be our body responding to too high body temperature (stressor), with activating sweat glands (effector) in order to lose more body heat (response). A positive feedback loop happens when the organism chooses to intensify the push away from homeostasis, rather than reverse it. This happens when there is a definite end goal that can only be achieved when the organism is not in homeostasis. A good example here is childbirth, where a child can only be born if the mother's body is outside of homeostasis.

## 3. THE CONCEPT OF BLEED

The role-playing game concept of *bleed* (Boss 2007; Leonard and Thurman 2018; Hugaas 2024) describes the spillover between player and character. This spillover can among other things take the form of emotional states, physical states, mental states, physicality, values, and opinions and other cognitive concepts. When this spillover goes in the direction from player to character we call it *bleed-in*, and when it goes from character to player, we call it *bleed-out*. This paper is mostly concerned with bleed-out, but the suggested theoretical approach works well in both directions.

Over the years several specific types of bleed have been suggested, some of which can be considered basic building blocks or *bleed components* that together can create more elaborate *bleed complexes* (Hugaas 2024).

### Bleed components:

- *Emotional bleed* (Montola 2010; Bowman 2015), where emotional states spill over;
- *Procedural bleed* (Hugaas 2019), where physical abilities, perceptual experience, motor skills, traits, habits, and other bodily states spill over; and
- *Memetic bleed* (Hugaas 2019), where ideas, thoughts, opinions, convictions, ideologies and similar cognitive constructs spill over.

### Bleed complexes:

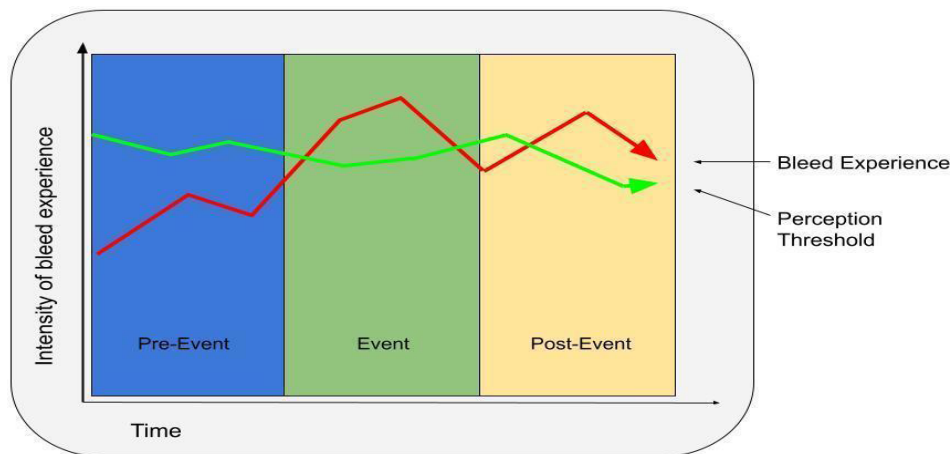
- *Relationship bleed*, where aspects of relationships spill over. *Romantic bleed* (Harder 2018; Bowman and Hugaas 2021) is the most studied;
- *Ego bleed* (Beltrán 2012), where fragments of archetypal qualities and personality traits spill over;
- *Identity bleed* (Hugaas 2024), where aspects of our sense of self and our multiplicities of identities spill over; and
- *Emancipatory bleed* (Kemper 2017), where players from marginalized backgrounds experience liberation from that marginalization through their characters and/or play experiences.

As indicated by this list, bleed is a complicated phenomenon that can manifest in a number of different and distinct ways. If we look at the complexes, we can make the argument that all of

them are related to different aspects of the player's sense of self. As bleed-out is often reported to cause a heightened sense of confusion and discomfort, a bleed experience also has a lot in common with how different states of identity confusion are experienced (e.g., Erikson 1950; Marcia 1966).

#### 4. THE BLEED PERCEPTION THRESHOLD

As bleed is a subjectively experienced and reported phenomenon, it can be difficult to study. In addition, whether players will report experiencing bleed will also be strongly dependent on whether they are aware of the concept altogether; how their play culture and communities accept and support them; and how comfortable they are to share something that might be deeply personal. Furthermore, whether bleed is experienced to a degree where it is noticeable at all is also something that will affect both the availability and the quality of collectable data.



**Figure 2:** An example of the bleed perception threshold (Hugaas 2024)

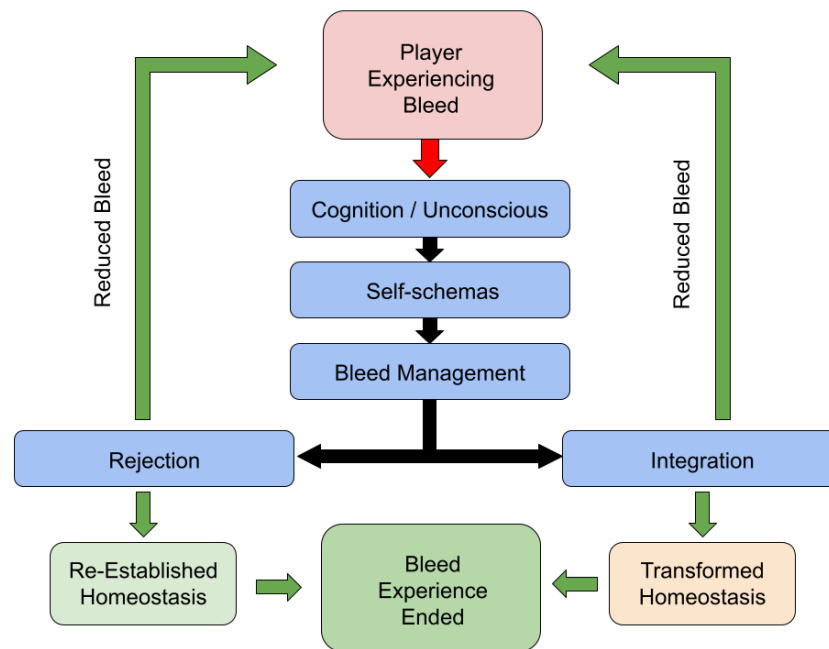
The concept of *the bleed perception threshold* (Hugaas 2024) posits that bleed is a role-playing induced and role-playing specific process of identity formation and creation that will always be part of any role-playing experience; it is only when bleed manifests with enough intensity to be noticeable to the player that it is registered and reported. This idea is built on the general agreement in various identity theories from psychology and social psychology that the sense of self is constantly shifting, adapting, evolving, changing and forming as we go through life (e.g., Stryker 1968, Piaget 1972; Jung 1976; Stets and Serpe 2013; Jhangiani et al. 2022).

#### 5. BLEED AS INTRAPERSONAL CONFLICT

If we consider the reported discomfort and imbalance players experience through the lens of homeostasis, we can think about bleed as a form of intrapersonal conflict that pushes the player out of psychological homeostasis. In other words, forces within the players themselves create the discomfort, and that this will continue until the conflict is transformed or managed in a way that brings the player back into psychological homeostasis. In other words, when a player finds that their sense of self does not align with the experienced self in connection with a role-playing experience, the following identity confusion manifests as a bleed experience that constitutes an intrapersonal conflict within the player.

## 6. BLEED EXPERIENCES AS A HOMEOSTASIS PROCESS CYCLE

When we reimagine the simple homeostasis process cycle described in Figure 1 as a bleed experience homeostasis process, we find that each part has a well fitting corresponding part from bleed theory.



**Figure 3:** Bleed Experience as a Homeostasis Process Cycle

Based on whether the bleed perception threshold has been surpassed or not the *sensor* will be either cognitive or unconscious. The theory of the threshold states that players are experiencing bleed even when they are not aware of it, which has its counterpart in homeostasis process theory, as responses to stressors might be implemented without the individual even being aware of them. For example, one of the reasons internal bleeding can be so dangerous is because the body tries to remain in homeostasis by reacting to the falling blood pressure by emptying blood reservoirs and increasing heart rate (Schiller et. al. 2017), effectively masking the problem from the individual until it might be too late to address. Similarly, the identity formation process that follows bleed from a role-playing experience might go completely unnoticed by the player themselves.

Furthermore, the *control* will take the form of self-schemas (Piaget 1972; Palmquist 1993), which are constantly altering and developing structures in our minds where we store complex beliefs and knowledge about ourselves. Our understanding of the person we are, our self-concept, can be gathered from the sum of these numerous self-schemas. If a control against the self-schemas reveal to the player that their current experience of themselves is too far removed from their established self-concept, bleed management will be implemented as an *effector*.

Returning to the mentioned bleed-in and bleed-out differences, we can posit that whereas the following theories around feedback loops in theory are applicable to both types, the social implications for the player from a strong bleed-out experience are potentially much greater than a bleed-in one could ever be. In short, if a character changes because a player's sense of self imposes itself strongly on it, then the character is played a little differently than was intended, while if the opposite happens, the player's entire sense of self might be affected.

## 7. NEGATIVE FEEDBACK LOOP: REJECTION AND RETURN TO HOMEOSTASIS

When the response to the bleed experience is to try to counter-balance it, the responding bleed management will try to reject the new experience of self in favor of the already established sense of self and try to return to the original state of homeostasis. In regards to role-playing, this process could for example include a player whose character held different religious/spiritual/political beliefs than themselves, actively reinforcing their pre-game held convictions after the game. The player's existing sense of self imposes itself with more force, pulling them closer towards the original psychological homeostasis.

There are many complex psychological processes that can push a player towards a negative feedback loop. As an example, psychological identity defence mechanisms (Freud 1946) can help explain this push. In short, these mechanisms exist to make sure that the individual is functional and can perform actions that are necessary to keep themselves alive. In prehistoric times, these might have been more acutely related to physical tasks and needs, but even in contemporary times it is important for the individual to know themselves and how people expect them to behave in order to be an accepted member of their community.

## 8. POSITIVE FEEDBACK LOOP: INTEGRATION AND A NEW HOMEOSTASIS

When the response to the bleed experience is to try to integrate it, the responding bleed management will try to create a new state of homeostasis that includes both parts from the original sense of self and the new experienced self. In this sense, the process of integration (Bowman and Hugaas 2019) can be seen as a way for the player to recreate or reinvent their own sense of self in order for it to feel more aligned with the experienced self from the role-playing experience. When the player's psyche accepts this integration, a new state of homeostasis is created. With regards to the mentioned example of the player whose character held different beliefs than themselves, an example of a positive feedback loop could be the player exploring these different beliefs further with curiosity post-game, and ending up adopting parts or all of them.

While integration is a process that might happen whether the player is aware of it or not, especially if the bleed experience is below the bleed perception threshold, there are numerous suggested practices that support integration after role-playing games. Bowman and Hugaas (2019) suggest the following main categories of integration practices:

- Creative expression
- Intellectual analysis
- Emotional processing
- Returning to daily life
- Interpersonal processing
- Community building

The practices themselves can help the process of integrating role-playing experiences, but the cognitive awareness of such things being possible and the permission granted from one's community to alter one's sense of self are crucial components as well.

## 9. BLEED MANAGEMENT AS A SERIES OF FEEDBACK LOOPS

As pictured in Figure 3, a feedback loop can either lead to reduced bleed or towards the bleed experience ending. In other words, this is not a binary where one ends up in either a singular negative or a singular positive feedback loop. Thus, any bleed experience might not only contain a number of loops, but these loops can be both negative and positive and also that they can happen

simultaneously. In sum, this means that a player can be managing bleed through both rejecting and integrating parts of the new experienced self at the same time. In fact, considering how identity formation can be understood as a foundational never-ending process (e.g. Stryker 1968; Piaget 1972; Jung 1976; Stets and Serpe 2013; Jhangiani et al. 2022), it can be hard to imagine a bleed experience that exclusively follows negative feedback loops, suggesting that it is not possible to have such an experience without one's psychological homeostasis and sense of self shifting to some degree.

## 10. RECOVERY AND RESILIENCE: IMPROVED BLEED MANAGEMENT

Recovering from imbalance and re-establishing psychological homeostasis has been shown to increase the ability to recover faster and with less effort from future episodes of imbalance by directly affecting physiological processes related to the activation of resilience mechanisms (Hermans et al. 2025). In other words, successfully recovering from episodes of imbalance back to a state of psychological homeostasis can change how the body itself reacts to similar experiences in the future and build resilience towards these, e.g., developing skills in emotion regulation (Leonard and Thurman 2018).

## 11. CONCLUSION

Bleed theory has developed significantly over the last 20 years, but we are lacking a theoretical framework to explain why bleed is experienced the way it is, as well as how to connect it to the formation of a sense of self in the player. Looking at it through the lens of the theory of physiological and psychological homeostasis offers new ways of thinking about bleed, which can support the development of tools to measure it in the future.

Connecting this process to role-playing and bleed theory, potential future directions of this research can explore how resilience supports might affect bleed, e.g., do more experienced players experience lower amounts of bleed? Are they better equipped to handle bleed-related interruptions in homeostasis when they occur than when they were younger and less experienced? In a related way, successfully navigating such experiences can also explain anecdotal claims about having greater resilience in real life adversity as a result of having gone through similar occurrences in role-playing settings (e.g., Hugaas 2023)

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**Kjell Hedgard Hugaas** is a Northern Norwegian game designer, organizer, writer, theorist, and trained actor. He has theorized how ideas impact players through the processes of memetic bleed, procedural bleed, and identity bleed, culminating in his 2022 Master's thesis in Game Design at Uppsala University. In 2023, he completed a second thesis for UU on the impacts of larp on participants' attitudes and anxieties around death. In addition to independent projects and consultancy work, he worked as a project assistant at Uppsala University in connection with their Erasmus+ EDGE and ROCKET projects. He also works for LARPifiers in Horizon Europe's Larpocracy project and is CEO of the game studio and research company Evocative Games AB, where he works as a project manager on the Erasmus+ project Dystolarp.