

## Feedback Loops in Clinical Practice: An Integrative Framework

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### Abstract

*Practical concepts and interventions for counsellors and their clients are presented based on Maruyama’s concept of feedback. Elements of psychodynamic theory, Weinberg’s theory and Moreno’s role theory are reformulated in terms of feedback. The concept of feedback also links network theory and chaos theory; cognitive challenges and psychodynamic interpretation. This forms an integrative framework for understanding human functioning. Human functioning emerges from the interaction of innumerable intrapersonal and interpersonal feedback loops. The feedback loops organise a network of actions, ideas and feelings, and a network of roles. Some feedback loops tend to intensify life difficulties, while others tend to resolve these difficulties. The counselling interventions evolved from problem-gambling counselling practice, and example interventions are provided based on a composite problem gambler.*

### Introduction

The integrative framework presented here (the ‘Feedback Framework’ or ‘Framework’ <sup>2</sup>) offers practical concepts and interventions for counsellors and their clients. It is broadly applicable, despite having evolved from my specialised work as a problem-gambling counsellor over the last nine years. I wanted to understand the madness of problem gambling and this drew on my fascination with various systems theories. From the outset, I used the evolving interventions with clients, setting up a recursive research cycle of developing theory and then testing it in practice. This involved reflecting on the practice and searching the literature. I also interacted with others via use of the evolving interventions in reflective teams, peer supervision, presentations at conferences (Gunner, 1997; 1998), and a master’s thesis by research (Gunner, 2002).

This article reviews the concept of feedback and some psychodynamic theory before presenting the feedback loops that organise human functioning, illustrating these

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<sup>1</sup> This note on the author has been changed, including the contact address.

<sup>2</sup> The framework could also be called “role network theory”. This is not in the published article

using a composite case example. I reformulate elements of psychodynamic theory (Malan, 1979) and Weinberg's theory (1969; 1981; 1995) in terms of feedback, providing the basis for feedback diagrams which can be used as counselling interventions. Cognitive challenges and psychodynamic interpretations emerge from this Framework. I outline links between feedback, Moreno's role theory, network theory and chaos theory. The resultant theory views human functioning as emerging from the interaction of innumerable feedback loops that organise a network of actions, ideas, feelings and roles.

### **The Concept of Feedback**

I suggest that feedback (Maruyama, 1968) organises human functioning. In general systems theory, a feedback loop is a closed loop of causal links between elements of a system. A change in any of these elements influences the next element in the loop and then the next and the next, in a ripple around the loop until the last element influences the original one, which causes a further ripple around the loop and so on (Capra, 1997: 56). A feedback loop describes a system's *pattern of organisation*, as distinct from its *physical structure* (ibid: 64). There are two types of feedback. (a) A *damping feedback loop* tends to decrease deviation in the system. A motor car provides an example. Consider the car's direction deviating to the right. Causal link 1: this deviation tends to make the driver turn the steering wheel anticlockwise. Link 2: this tends to turn the car left. It is a *damping* feedback loop, as it tends to decrease the deviation. The word *tends* is used, as other things may also influence the deviation, e.g. the driver could fall asleep. (b) An *amplifying feedback loop* tends to *escalate* deviation in the system. For example, consider a change or deviation in a rock, the appearance of a slight crack. Link 1: the crack collects water. Link 2: in freezing weather, the pool expands as it turns to ice, applying greater force on the containing rock, which tends to enlarge the crack. Link 1 again: the enlarged crack then collects more water and the fracturing of the rock continues (Maruyama, 1968: 305). This is an *amplifying* feedback loop, as it tends to increase the deviation. This process is destructive insofar as it breaks the rock. It is creative or transformative insofar as it contributes to the development of soil and plant life.

Maruyama identified the creative potential of amplifying feedback and its role in generating the world around us. He proposed that any society or organism contains many feedback loops; the damping feedback loops tend to *maintain* the system despite environmental change, while the amplifying feedback loops tend to *transform* the system. This article, like previous publications on systemic therapy, such as Goding (1992) and Hoffman (1981), applies Maruyama's theory to human functioning. What is different here is that I link the concept of feedback loops with concepts from psychodynamic theory, and other approaches.

## **Psychodynamic Concepts**

Psychodynamic theory (Malan 1979: 10, 15) proposes that:

- *Defences* are used to avoid unacceptable feelings or impulses (Weinberg, 1995, calls these unacceptable things 'dreads'). These defences range from being almost wholly conscious to being totally unconscious. Three key features of a defence mechanism are: (1) a dread (2) anxiety (a troubled state emerging from fears about the dread) and (3) the defence, which tends to repress the dread, excluding it from consciousness.
- The *return of the repressed* occurs when the dread returns in a disguised form.
- A *psychodynamic interpretation* occurs when the counsellor presents to the client a connection between defence and anxiety, defence and dread or anxiety and dread.

Malan briefly alludes to feedback. He states that a defence mechanism which involves other people can become damaging through the setting up of a 'vicious circle' between the individual and others. I will argue that any defence can be presented in terms of feedback.

### ***Case Example***

To illustrate the feedback loops that organise human functioning and the related counselling interventions, I include a case example based on several real clients.

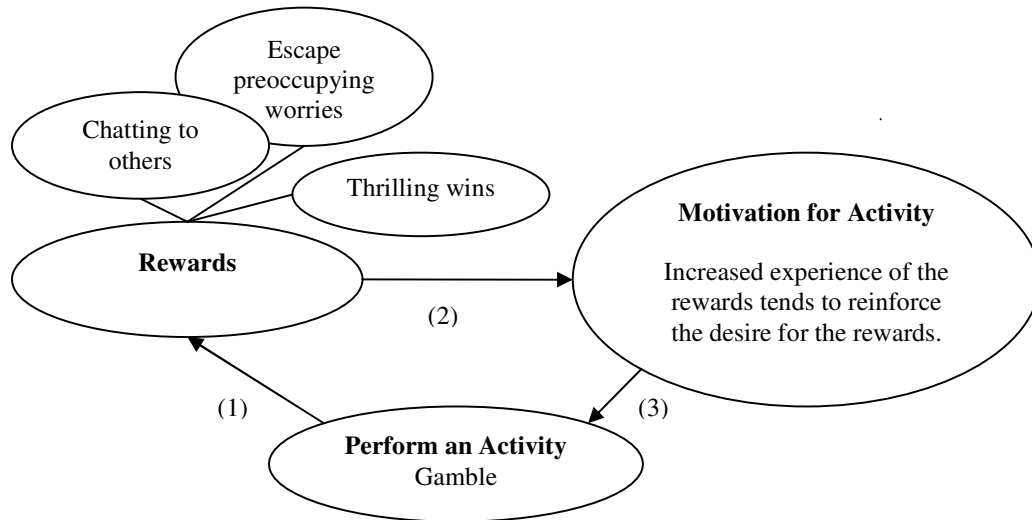
Ms Black, aged 56, was divorced with adult children and grandchildren. She had frequent contact with her mother, despite a fraught relationship. Ms Black said she felt betrayed by her mother, who criticised her and orchestrated her isolation from the family, even from Ms Black's children and grandchildren. Ms Black agonised over this. Two years ago, after difficulties with arthritis, she started having problems with electronic gaming machines, repeatedly lost her whole pension and began pawning jewellery. She lied to hide these things from her family. The gambling venue staff talked to her and offered her drinks, but she thought some staff members were joking about her gambling, and she tried to hide her losses from them. On her way to a family birthday gathering, she gambled and lost all her money. As she had no money to buy petrol, she missed the family gathering. This led her to counselling.

## **Rewards and Damage in Feedback Terms**

### ***Rewards, Motivation and Activity: Amplifying Loops***

Each activity that people perform offers some reward which attracts them to that activity. Rewards tend to increase the activity, organised by an amplifying feedback loop linking the activity, its rewards and its motivation. Motivation includes both ideas and feelings related to the behaviour.

Ms Black provides an example of these amplifying feedback loops. Consider a deviation, an increase in her gambling. Figure 1: Link 1: increased gambling tended to increase her gambling rewards, e.g. chatting with the venue staff and escaping preoccupying worries. Link 2: increased rewards tended to reinforce her motivation to gamble. Link 3: in turn, this tended to increase her gambling. The loop tended to escalate the deviation. Each perceived reward of gambling forms a separate amplifying feedback loop.



**Figure 1: Escalation of an activity, its rewards and motivation**

***Damage, Motivation and Activity: Damping Loops***

Most activities can lead to some form of damage or cost, consequences that tend to *discourage* the person from the activity. A damping feedback loop links the activity, the resulting damage and the motivation for the activity.

For example consider a deviation, an increase in Ms Black’s gambling. Link 1: increased gambling tended to increase the damage caused by gambling, that is, she tended to lose more money. She tended to become more ashamed and secretive (intrapersonal damage). She also tended to behave more strangely, which tended to increase her family’s criticism of her (interpersonal damage). Link 2: this increase in damage tended to diminish her motivation to gamble. Link 3: this tended to decrease her gambling, that is, decrease the deviation thus forming a damping feedback loop. Each sort of damage forms a separate damping feedback loop. Acting alone, these would eliminate her gambling; however, there are often other feedback loops at play.

### ***Damage, Motivation and Activity: Amplifying Loops***

While damaging consequences of an activity tend to decrease the activity, simultaneously, via different feedback loops, this damage can also contribute to *increasing* the behaviour. For example, when Ms Black lost, she often kept on gambling, trying to win back her losses. Consider a deviation, again an increase in her gambling. Link 1: increased gambling tended to increase her losses (damage). Link 2: this tended to increase her desperation (motivation), as she thought that a big win was her only way out of her trouble. Link 3: this tended to increase her gambling (activity), that is, increase the deviation thus forming an amplifying feedback loop.

### **Dread, Anxiety, Defence and Damage: Amplifying Loops**

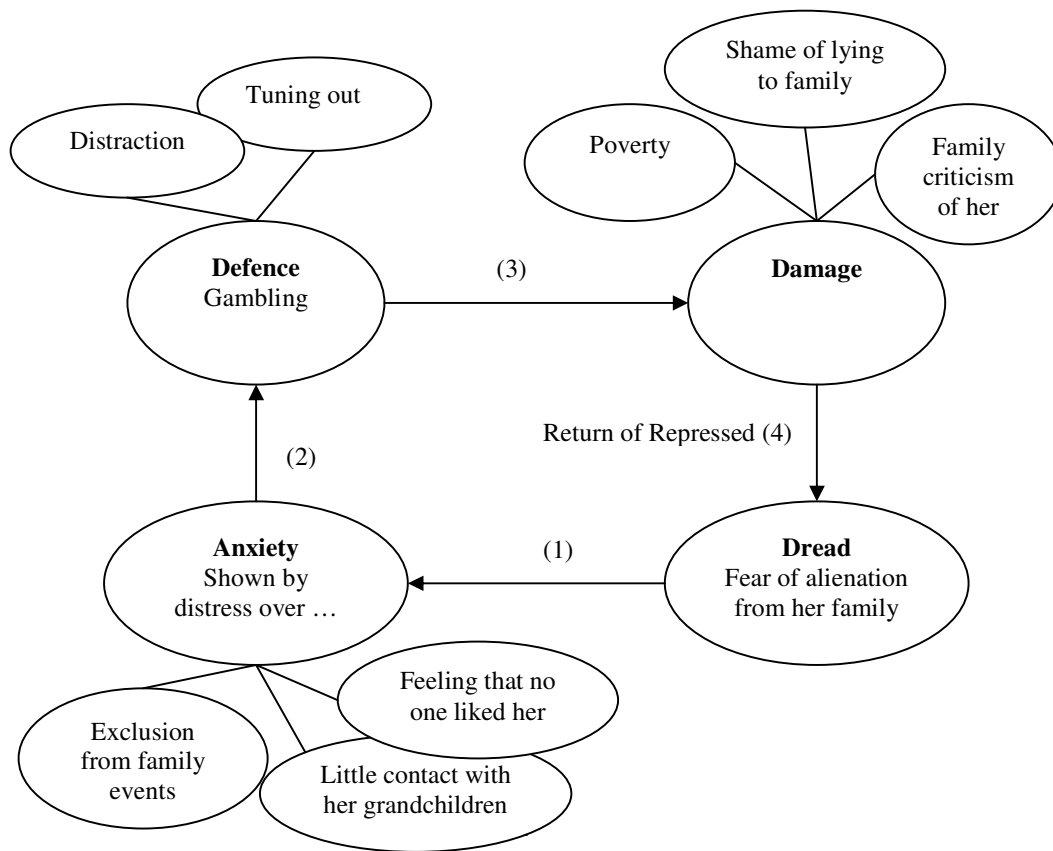
Here the elements of a defence: dread, anxiety and defence are presented in terms of feedback. The damage caused by the defence tends to complete an amplifying feedback loop linking dread, anxiety, defence, and damage. I examine two examples of this. In one the dread is of alienation. In the other the dread is of boredom. Both these loops can readily be presented to clients.

#### ***The Escalation of Alienation and Gambling***

One of Ms Black's *dreads* was alienation from her family. Her *anxiety* about this dread was evident in her distress when she reported: being left out of family events, missing her grandchildren, and her generalised concern that nobody liked her. One of her *defences* against this anxiety was her gambling.

Consider the links between her dread, anxiety, defence and the damage, starting with a deviation, an increase in her dread of alienation. Figure 2: Link 1: this deviation tended to increase her anxiety. Link 2: this tended to increase her desire to 'tune out' and so increased her gambling. Links 3 and 4: this tended to increase the gambling damage and her dread, in several ways. Intrapersonally: her increased gambling tended to increase her lying, to hide the gambling from her family. This increased lying tended to increase her discomfort with her family and fear of alienation. Interpersonally: her increased gambling tended to increase her erratic behaviour, like missing family gatherings, which aggravated her mother's critical comments and Ms Black's fear of alienation. This is an amplifying feedback loop, as it tended to escalate the deviation. This mutual causal system tended to increase the dread, anxiety, defence and damage together.

A mechanism for what Malan calls the 'return of the repressed' can be seen in Link four of Figure 2, where the gambling damage tends to reinforce the original dread.



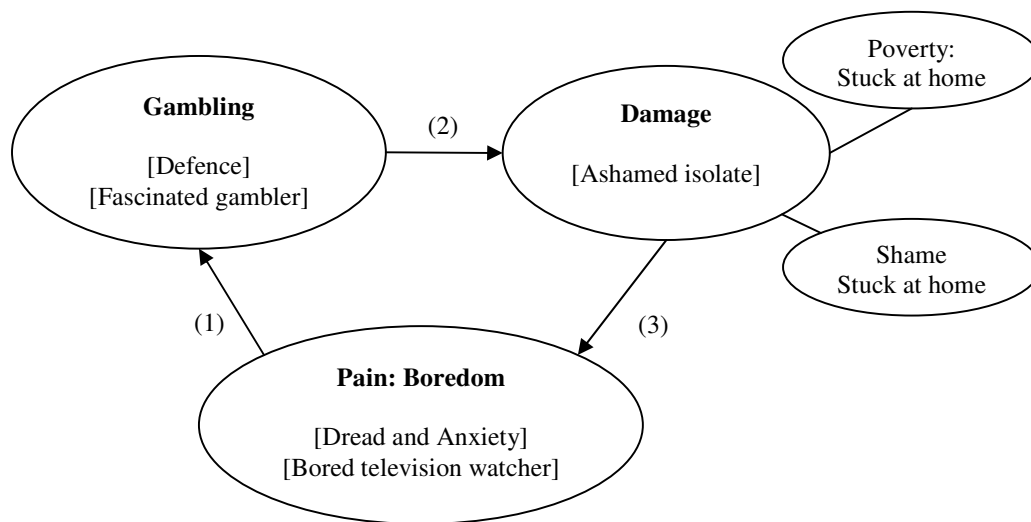
**Figure 2: Escalation of dread, anxiety, defence and damage**

***Psychodynamic Interpretation***

I suggested to Ms Black that her gambling helped her escape from worrying about her family. This link between her alienation (dread) and her gambling (defence) made sense to her. She became tearful as she absorbed this idea. The intervention linked her defence with her dread, so it can be seen as a psychodynamic interpretation.

### ***The Escalation of Boredom and Gambling***

Here is the second example of a ‘dread, anxiety, defence, damage’ feedback loop. It shows how, when presenting these ideas to clients, I compress ‘dread and anxiety’ into one category called ‘pain’. Boredom is a common ‘pain’ for problem gamblers, and its ‘pain, defence, damage loop’ is easily presented in counselling. In her first session, Ms Black said she gambled because she was bored at home with nothing to do but watch television. I challenged the way she valued gambling as a way of relieving boredom by presenting Figure 3 to her on a whiteboard. Boredom leads to gambling (Link 1). Also, gambling leads to increased damage (Link 2), and increased boredom (Link 3) and so to increased gambling (Link 1). The increased gambling tended to exacerbate her poverty, which precluded pleasures like going to movies, and so tended to increase her boredom. It also deepened her shame, which ruled out visiting friends and so tended to increase her boredom. Her gambling (defence), the damage and her boredom (pain) tended to escalate together.



**Figure 3: Amplification of boredom, gambling and damage**

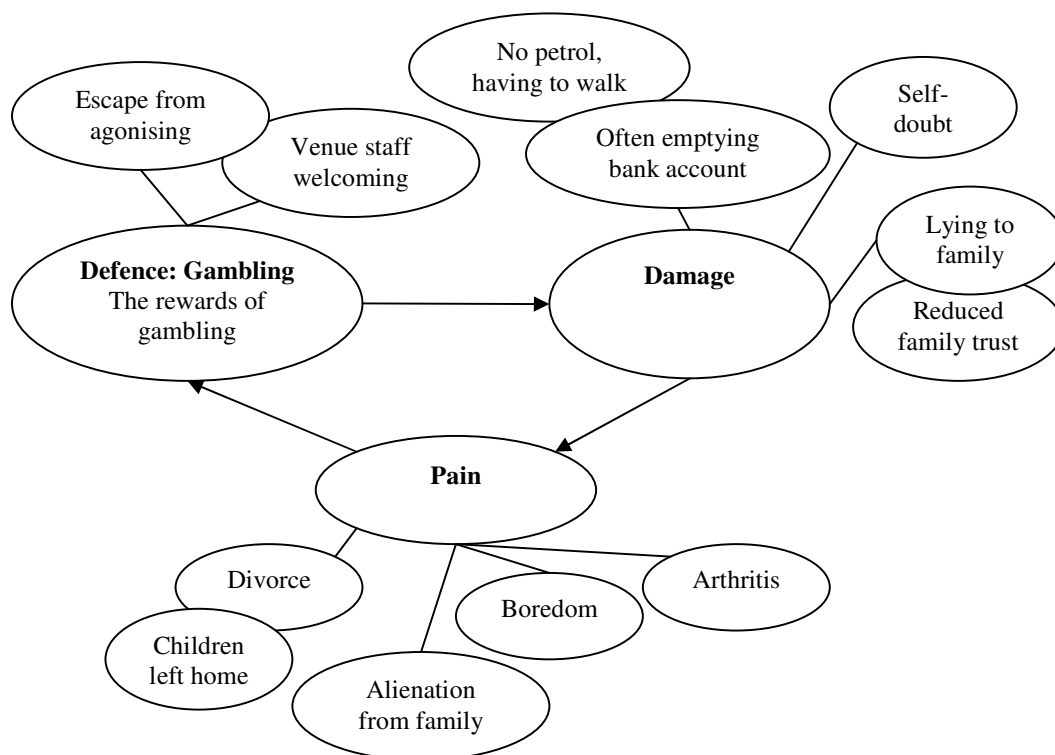
### ***Cognitive Challenges***

This systemic understanding produces interventions that, like cognitive interventions, challenge dysfunctional thought patterns. The cyclic logic of the above intervention regarding boredom challenges the client’s incomplete cognition, her sole focus on boredom leading to gambling. It suggests that while gambling offers a short-term solution to boredom, it can increase it in the longer term, producing a vicious escalating cycle.

### *Using a Summary Feedback Diagram*

Sometimes I use a ‘pain, defence, damage diagram’ that focuses on one feature of the system, like the pain of alienation or boredom. At other times, for example when a client asks me how I see their situation, I can construct a single summary feedback diagram that reflects much of what they have told me, for example, Figure 4. I often construct this in collaboration with the client. Under ‘defence’, we place things that attract the client to the defence or problem behaviour. Under ‘damage’, we include the losses and shocks resulting from the defence. Under ‘pain’, we put the life difficulties mentioned or implied by the client. Pain can emerge from difficulties with normal development, unexpected life events like trauma, or disease and unacceptable aspects of the self.

These diagrams encourage clients to see that problem gambling can be associated with other life problems rather than being an isolated difficulty. Constructing these diagrams assists me to maintain an overview of the client’s situation. They can be used to discuss an intervention plan with a client, e.g. should counselling focus on the gambling behaviour or on the pain? I often use these feedback diagrams as summaries in case notes.



**Figure 4: A summary feedback diagram for Ms Black**

These interventions can be effective. One woman brought her gambling husband to counselling. In this first session she asked, 'It's silly. Why does he do it?' I improvised one of these diagrams. I had heard little of his story, so the diagram contained only a few elements. It included the pain of 'feeling alone' (alienation). The gambler gazed long at the diagram. He said, 'It's amazing what a difference a diagram can make. I can see my face [myself] in each part.' At my suggestion, he drew the diagram on some paper to take home. He moved from being wary of counselling to being receptive, and came to subsequent sessions unescorted. The circular logic represents gamblers as trapped in a tornado of their own making. It avoids the harsh criticism of the gambler that can emerge from considering the gambling and the damage in isolation.

### **Cautions about the Use of Feedback Diagrams**

Here are several cautions about using feedback diagrams like Figure 4 in counselling. First, presenting such diagrams to clients can bluntly raise disturbing issues for them. Counsellors need to be guided by how each intervention changes their rapport with a client (Malan, 1979). Second, the diagrams tend to focus on the client's life difficulties. To balance this, a counsellor can emphasise client strengths and moves towards recovery. Finally, these feedback loops can frighten clients, as they identify the vicious, tornado-like side of amplifying feedback. As described below, counsellors can also identify amplifying feedback, which has the potential to organise client recovery.

### **Weinberg's Theory in Terms of Feedback**

I now present elements of Weinberg's theory and reformulate them in terms of feedback.

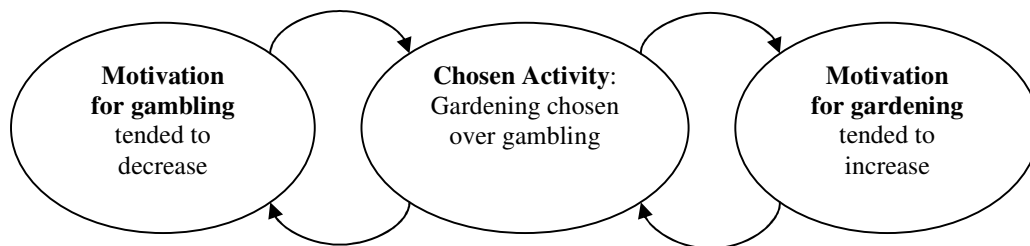
#### ***Motivation and Chosen Activity: Amplifying Loops***

Weinberg argues that people constantly recreate their whole psychic structure through habitual behaviour. People understand that motivation directs behaviour. They commonly overlook how *behaviour* reinforces the ideas and feelings that *motivate* it. Weinberg's *direct effect principle* is that any chosen action tends to reinforce each motivation behind the action directly — independent of the influence of any rewards or damage from the activity. Each choice of an activity brings rationalisation, strengthening a person's belief that the activity is right and necessary. Conversely, each rejection of an activity weakens a person's motivations to engage in it (Weinberg, 1969: 38; 1981: 121; 1995: 189).

I conceptualise this relationship between behaviour and motivation in terms of feedback. An amplifying feedback loop occurs between any chosen activity and each of its motivations.

Let us again use Ms Black as our example. Consider a deviation, an increase in her motivation to gamble for relaxation. Link 1: this deviation tended to increase her gambling. Link 2: Weinberg's direct effect principle suggests that this increase in her gambling, a chosen activity, tended to reinforce her multiple *motivations* to gamble, including her idea that gambling relaxed her. This is an amplifying loop.

Conversely, whenever Ms Black chose to return to an old hobby, gardening, in preference to gambling, her choice tended to *diminish* her motivation to gamble — and reinforce her motivation to garden, see Figure 5. Ms Black's gardening, and each of her motivations to garden, formed one amplifying feedback loop. This applies to other activities like gardening that may contribute to liberating a person from problems with gambling. Each choice reinforces the motivations behind the chosen action and lessens the motivations behind the rejected actions. Many therapies, e.g. solution focussed therapy, directly attempt to initiate transformative activities or ideas, i.e. to activate amplifying feedback.<sup>3</sup>



**Figure 5: Choice and rejection of an activity and motivation**

The direct effect principle has practical implications. It suggests that people are pliant and can develop a desired motivation in themselves by noticing when they experience a little bit of this motivation, and then acting on this embryonic motivation in that moment. A stingy person can develop generosity in this way, as even a stingy person has moments of some appreciation of others (Weinberg, 1981: 178).

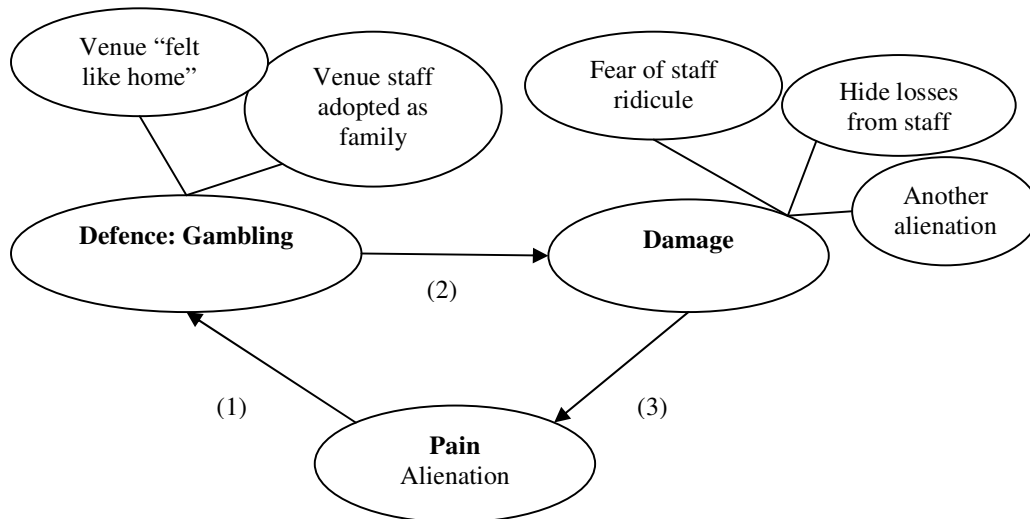
Weinberg's concept suggests clinical interventions. For example, when Ms Black told me she was leaving her credit card at home, I supported her, as she was acting on her stated motivation to 'regain her own life'. I said this would limit her potential gambling losses, weaken her gambling mentality and strengthen her desire to 'regain her own life'. She could value leaving her card at home for each of these reasons

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<sup>3</sup> This sentence is not in the published article

### *Defences as Symbolic Solutions to Dread: Amplifying Loops*

Defences are symbolic solutions to dread. They offer the illusion of tackling the dread, both concealing the dread and renewing it (Weinberg, 1995: 191).



**Figure 6: Symbolic solution: venue staff as ‘family’**

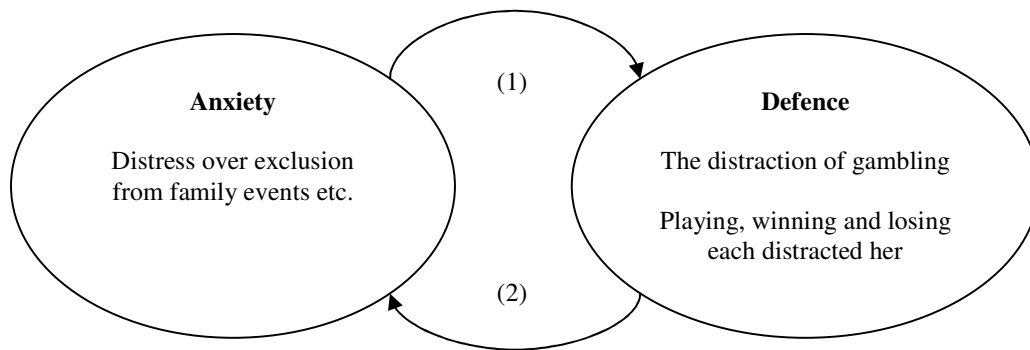
Ms Black’s attraction to the gambling venue provides an example. Consider a deviation, an increase in her feeling of alienation. Figure 6: Link 1: this deviation tended to increase her gambling. She said she liked going to her favourite gambling venue, because the staff members were ‘nice’ and it ‘felt like home’. In this way, she adopted the venue staff as ‘family’, a symbolic solution to her alienation from her real family. Link 2: her increased gambling tended to increase the damaging consequences. She feared that some staff members were joking about her losses. She felt ashamed and tried to hide her losses from them. Link 3: this increased damage tended to increase her pain. Like her real family, the staff became another group that attracted her and then betrayed her. This amplifying loop tended to escalate her defence (gambling), the damage and her pain (alienation). Ms Black’s gambling was a symbolic solution to her dread. She developed the illusion that the venue was a ‘nice home’. It tended to both conceal her alienation from her biological family and renew her alienation, now within her adopted home.

### **Defences Reformulated in Terms of Feedback**

As proposed above, defences *can* form amplifying feedback loops linking dread, anxiety, defence and damage. Now I argue that *any* defence can be presented as: (a) amplifying feedback loops linking a dread, an anxiety and the defence. These loops do not involve the damage. They operate simultaneously with the loops linking dread, anxiety, defence and damage; and (b) damping feedback loops in which increasing the defence tends to control anxiety.

### ***Anxiety and Defence: Damping Loops***

A defence tends to reduce our awareness of a dread to avoid anxiety. This is organised by a damping feedback loop, linking anxiety and the defence.



**Figure 7: Anxiety and defence form a damping loop**

Consider a deviation, an increase in Ms Black's anxiety. Figure 7: Link 1: increased anxiety often prevented her sleeping and then she would go gambling, and so the increased anxiety tended to increase her gambling. Link 2: increased gambling tended to relieve her anxiety. While she was gambling, she was entranced, which distracted her from her anxiety. When she had a winning streak, she felt pleased, which also distracted her. Losses often created crises, like how to pay a phone bill, which also distracted her. Her increased gambling: playing, winning and losing, tended to increase her distraction and so to decrease her anxiety. This *damping feedback loop* tended to control increases in her anxiety.

### ***Dread, Anxiety and Defence: Amplifying Loops***

Unconscious dread of a traumatic event recurring [is] sustained by the very activities first adopted [as a defence] ... Every avoidance [defence] aggravates the terror and sustains it ... By each avoidance, the person is whispering to himself, 'Look out or the exact same thing will happen again' (Weinberg, 1995: 197, 198).

Weinberg's ideas can be presented as a feedback loop linking Malan's concepts: dread, anxiety and defence. This loop does not include the damage. Consider a deviation, an increase in dread. Link 1: increased dread tends to intensify the anxiety. Link 2: this tends to reinforce the choice of the defensive activity. Link 3: by Weinberg's direct effect principle, each choice of the defence directly reinforces all the motives behind the defence, including the dread. This *amplifying feedback loop* tends to escalate the dread, the anxiety and the defence.

For *any* defence, the damping loop linking defence and anxiety (Figure 7) can offer temporary reduction of anxiety. However, it is often at the cost of longer-term

escalation of each of the dread, anxiety and defence. In this way, *all* defences can be viewed in terms of feedback. This argument rests in part on Weinberg's direct effect principle.

### ***Return of the Repressed***

Psychodynamic theory proposes that the defence tends to repress the dread, and that the repressed can return. The mystery of these opposing tendencies is clarified when defences are viewed in terms of feedback. I have now identified two mechanisms for the 'return of the repressed': (a) each choice of the defence reinforces the dread, and (b) the damage caused by the defence can intensify the dread, as in Figure 2.

### **Problem Behaviour, Shocks and Denial: Amplifying Loops**

Other amplifying feedback loops can escalate: problem behaviour, the resulting shocks and the denial of the shocks. While a shock can lead to attempts to control the problem behaviour, the behaviour often continues. For example, Ms Black was shocked the first time she lost all her money, but she returned to gambling, repeatedly lost all her money and eventually got used to this happening. This loop suggests how a gambling mentality can develop through escalating denial.

### **Networks and Roles**

The Feedback Framework also links Moreno's role theory and network theory. I will now present this very briefly.

A *network* is a collection of objects that are connected in some way (Watts, 2003: 27). When these connections become feedback loops, the network may become capable of self-organisation (Capra, 1997: 82). The web of life consists of networks within networks, with the nodes of each network themselves being networks (ibid: 35). Within each network, 'emergent properties' can be observed that did not exist at the less complex level. For example, an emergent property of sugar is its sweetness; this taste is absent in the carbon, hydrogen and oxygen atoms that bond to form sugar (ibid: 28).

*Role theory* proposes that a role is 'the functioning form the individual assumes in the specific moment he reacts to a specific situation' (Moreno 1964: 185). Moreno identified three elements of a role, the action and its associated ideas and feelings, for example, the 'disillusioned persistent gambler'.

This article presents *roles* in terms of feedback and network theory: human functioning emerges from a network of actions, ideas and feelings. I propose three networks.

First, a person's network of actions, feelings and ideas form roles, with each role internally organised by feedback. One amplifying feedback loop links the role's action with each motivation, i.e. motivating idea or feeling. For example, an amplifying loop forms between the action of gambling and the idea of persisting to get a win. Another example is in Figure 5, the amplifying loop linking the action of gardening and its motivation. In roles containing conflict, one damping feedback loop links the action with each conflicting motivation, for example a damping loop forms between the action of gambling and the feeling of disillusionment.

Second, a person's network of roles forms the self, with feedback loops also organising the interaction of roles. For example, Figure 3 can be seen as a feedback loop showing the movement from the pain of the 'bored television watcher', to the defence of the 'fascinated gambler', to the damaged 'ashamed isolate'. An emergent property of each person's network of roles is the person's self or character. This is consistent with Moreno who saw roles as the building blocks of the self. 'Role playing is prior to the self. Roles do not emerge from the self, but the self emerges from roles' (Moreno, 1964: ii).

Third, a network of selves or individuals forms a social system, like a family or nation. Individuals interact through roles and these interactions are organised by many types of feedback. Two types are the amplifying feedback loops proposed by Bateson (1971): *symmetrical and complementary behaviours*. An example of *symmetrical behaviours* is when two people are both in the role of the stubborn fighter: the argument escalates. An emergent property of each group is its culture.

These networks link to other larger and smaller networks. For example each action involves the network of body muscles, each muscle contains a network of cells and each cell contains a network of cellular components.

### **Feedback Theory and Chaos Theory**

Feedback is the organising principle behind chaos theory<sup>4</sup> and, as asserted by this article, behind human functioning. This provides a theoretical basis for suggesting that chaos theory applies to human functioning. Two examples of the alignment of the theories support this. First, both chaos theory and the Feedback Framework identify that similar conditions may result in dissimilar outcomes. That is, both challenge the classical law of causality, which states that similar conditions produce similar outcomes. The Framework suggests that amplifying feedback can increase very small differences between situations that seem identical, producing very different outcomes. Chaos theory calls this the 'butterfly effect' (Gleick, 1988: 23). Second, both theories predict the repetition of patterns. Chaos theory calls this 'self similarity' (ibid: 103). The Framework also predicts the repetition of patterns, like Ms Black's repeated attachment/alienation, enacted first with her family and then with the venue staff.

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<sup>4</sup> The mathematical process of iteration generates many of the prime examples of chaos theory, for example the Mandelbrot set. Also, iteration is the mathematical representation of feedback processes (Capra 1997: 123). Thus, iteration and feedback are the related organising principles behind chaos theory.

Warren, Franklin & Streeter (1998) identify chaos theory as an *inspiring* paradigm for therapists. My theoretically based proposal that chaos theory applies to human functioning suggests that chaos theory is a *pertinent* theory for therapists.

## Conclusion

The Feedback Framework is a theory of human functioning that links Maruyama's concept of feedback with elements of psychodynamic theory, Weinberg's theory, Moreno's role theory, network theory and chaos theory; also with cognitive challenges and psychodynamic interpretation. Individual human functioning emerges from the interaction of innumerable intrapersonal and interpersonal feedback loops. The feedback loops organise a network of actions, ideas and feelings and a network of roles. The feedback loops include:

- Loops organising the action, ideas and feelings of each role
- Loops organising the interaction of roles
- Amplifying loops linking an activity, its rewards and motivation
- Damping and amplifying loops linking an activity, its damage and motivation
- Loops associated with psychodynamic defences: the damping loops linking anxiety and defence (Figure 7), the amplifying loops linking 'dread, anxiety and defence', and the amplifying loops linking 'pain (dread and anxiety), defence and damage' (Figure 3).
- Loops emerging from Weinberg's theory, the amplifying loops linking each chosen activity and its various motivations
- Amplifying loops linking problem behaviour, resultant shocks and denial
- Amplifying loops formed by symmetrical behaviours and complementary behaviours (Bateson, 1971).

People's habitual behaviour constantly recreates their whole psychic structure as habits reinforce their motivating ideas and feelings, for example, Ms Black's habitual defensive role of the 'lonely fascinated gambler'. Her gambling reinforced its motivations, including her alienation and fascination. Her alienation was reinforced by amplifying loops like the 'alienation, anxiety, gambling, damage' loop in Figure 2. Her fascination was reinforced by amplifying loops like the 'gambling, rewards, motivation' loop in Figure 1. People constantly recreate themselves and they can also transform, sometimes in damaging ways, for example the initial development of Ms Black's problem gambling driven by the amplifying feedback loops in Figures 1, 2, 3 and 4. These transformative tendencies are often inhibited. Sometimes the restraint is from damping feedback, for example the gambling damage loop that discourages gambling. Sometimes the limit is due to alternatives competing with one another, for example gambling and gardening as in Figure 5.

Further work could examine the links between the Framework and solution focussed therapy<sup>5</sup>, Gestalt field theory (Parlett, 1991), self-organisation theory (Capra, 1997) and Gaia theory (Lovelock, 2006).

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<sup>5</sup> The published article contains a typo at this point.

Some may regard this paper's focus on feedback as belonging to family therapy's past, but this use of feedback merits focus as it is not widely evident. It does not appear in the problem gambling literature. The Feedback Framework (Gunner, 2002) has been identified by Jackson, Thomas and Blaszczynski (2003: 9) as a 'possible best practice development'. They recommended research into its effectiveness and into its transferability to other problem gambling counsellors. They wrote:

The framework appears to offer practical concepts and interventions for problem gambling counsellors and their clients, based on the solid foundations of [other] theories. ... One achievement of the framework is [its] capacity to integrate various therapeutic theories within the one intervention as psychodynamic theory is often seen to be in conflict with cognitive therapy ... (ibid: 2003: 9).

I have presented practical counselling interventions using the example of a composite problem gambler. These interventions can involve the counsellor and client collaboratively tailoring feedback diagrams of the client system. The resulting interventions can be similar to cognitive interventions or psychodynamic interpretations. The advantage of the Framework is that it provides counsellors with a systemic way of constructing the interventions. Also, the interventions are readily understood by most clients. Amplifying feedback offers a convincing understanding of out-of-control phenomena like problem gambling.

The Feedback Framework offers practical concepts and interventions for counsellors and their clients. It links a diverse range of theories and is still evolving. Comments are welcome.

## References

Bateson, G., 1971. The Cybernetics of Self: A Theory of Alcoholism, *Psychiatry*, 34, 1: 1–18.

Capra, F., 1997. *The Web of Life*, London, Flamingo/Harper Collins.

Gleick, J., 1988. *Chaos: Making a New Science*, London, Cardinal Sphere.

Goding, G., 1992. *The History and Principles of Family Therapy*, Melbourne, Victorian Association of Family Therapists.

Gunner, A., 1997. The Opposing Spirals of Problem Gambling and Recovery. In National Association of Gambling Studies Conference, *Proceedings*, Melbourne, The Association.

Gunner, A., 1998. The Opposing Spirals of Problem Gambling and Recovery. In National Association of Gambling Studies Conference, *Proceedings*, Adelaide, The Association.

Gunner, A., 2002. Problem Gambling Development and Recovery: A Reflective Counsellor's Practical Construction Based on Feedback. Unpublished MSW thesis, School of Social Work, University of Melbourne.

Hoffman, L., 1981. *Foundations of Family Therapy*, NY.

Jackson, A., Thomas, S. & Blaszczynski, A., 2003. Best Practice in Problem Gambling Services, Melbourne, Victorian Government Gambling Research Panel.

Lovelock, J., 2006. *The Revenge of Gaia*, London, Penguin.

Malan, D., 1979. *Individual Psychotherapy and the Science of Psychodynamics*, Cambridge, Butterworth.

Maruyama, M., 1968. The Second Cybernetics: Deviation Amplifying Mutual Causal Processes. In W. Buckley, *Modern Systems Research for the Behavioural Scientist*, Chicago, Aldine.

Moreno, J. L., 1964. *Psychodrama*, Volume 1, NY, Beacon House.

Parlett, M., 1991. Reflections on Field Theory, *British Gestalt Journal*, 1: 69–81.

Stevens, B.A., 1991. Chaos: A Challenge to Refine Systems Theory, *ANZJFT*, 12, 1: 23–26.

Warren, K., Franklin, C. & Streeter, C., 1998. New Directions in Systems Theory: Chaos and Complexity, *Social Work*, 43, 4: 357.

Watts, D., 2003. *Six Degrees: The Science of the Connected Age*, London, Heinemann.

Weinberg, G., 1969. *The Action Approach*, NY, Signet.

Weinberg, G., 1981. *The Pliant Animal*, NY, St Martins.

Weinberg, G., 1995. *Invisible Masters: Compulsions and the Fear that Drives Them*, London, Sphere.