Great Expectations
Barry Clasper
CALLERLAB Convention 2012

"To understand is to perceive patterns."
Isaiah Berlin

Introduction

In recent years, research in psychology and neurophysiology has demonstrated that the human brain is a pattern matching machine without peer. Our brains are continuously absorbing information from our surroundings, organizing it, and detecting patterns that enable us to predict what can be expected to happen next. This activity is largely automatic and effortless. Sometimes our predictions are wrong, but the vast majority of the time they are entirely accurate.

This discussion will outline how some of this new understanding might be applied to give us a fresh perspective on aspects of square dancing, our favorite activity.

Music: Playing With Our Expectations

The field of music offers dramatic illustrations of our brains' ability to recognize patterns. There is a video on YouTube that you can find by searching on "mcferrin pentatonic". It shows singer Bobby McFerrin demonstrating how a large audience can accurately predict, and sing, the next note in a series after hearing only two different notes. The video dramatically demonstrates how little information people need to make predictions about where a musical pattern might go. As we listen to music, our brains automatically detect the organizing patterns and create expectations of what should happen next. Composers know that certain patterns lead us to expect something specific to happen next, and they manage these expectations to create the pleasurable experience we recognize as music.

A One Ana Two ….

Modern psychologists have developed a metaphorical description of our mental structures that is useful for understanding how this pattern recognition happens. They describe the mind as having two "systems" - **System 1** and **System 2** – which interact to produce our mental experience.

System 1 is largely automatic and effortless, intuitive, and associative. As an item of information is processed by System 1, other information associated with it is automatically retrieved from memory, creating a ripple of activated memories that form a context surrounding the individual item. As additional items of information come in, the associations are revised to fit the evolving context. For example, if you hear the word "clothing", a series of possibilities, instances of clothing, probably start to come to mind. If you next hear the word "top", the associations that come to your mind will relate to both words – for example, "hat" and "coat". System 1 uses the information items coming in and associated memories to create an impression of what is happening, and therefore an expectation of what might happen next.

Despite its being automatic and effortless, System 1 is capable of learning to perform very complex tasks and make judgements that would appear to require complicated analysis. Mastery of almost any complicated task involves successfully training System 1 to perform the bulk of the "commonplace" analysis and produce virtually instantaneous answers. The trained System 1 can absorb all the data about the current situation and serve up an immediate answer that seems like an intuition or a hunch, but is actually the product of an unconscious yet sophisticated analysis. System 1 finds the patterns represented in the current situation and instantaneously associates them with results experienced in the past. You need look no further than what you are doing right now for proof of this contention: reading is an incredibly complicated activity that you are performing with almost no conscious effort. The mechanics of reading these words are entirely automatic, the result of many hours of training and practice.

System 2 is what we tend to think of as "us" - our personality, our awareness, our consciousness. It is the logical,

intentional part of our mind. It requires us to focus and work in a stepwise fashion to work through problems and understand situations. One of the jobs of System 2 to validate the answers that System 1 presents and determine if they are indeed appropriate.

You might think that this notion is just a rehash of the old concepts of the conscious versus unconscious mind. True, there are a lot of similarities, but there are important differences. The most important distinction is that System 1 and System 2 communicate with one another on a continuous basis. System 1 is continuously analyzing what is going on around us and sending conclusions to System 2: that car is not going to stop at the stop sign, the ball is going to hit you in the head, the coffee is about to spill, etc. System 2 can decide what to do with those conclusions: act on them, ignore them, or refine them. System 2 can also charge System 1 with tasks – for example if you need a hammer, System 2 will task System 1 with finding a suitable way to get one and suggestions will start to come to your mind: go to this store, borrow one from this neighbor, there's one in this drawer in the garage. Associative System 1 will only make useful suggestions: the store will not be 1000 miles away, the neighbor will not be on vacation, and you will be near your garage.

So, in summary, we have System 1 which is excellent at absorbing a large volume of information, making rapid associations with other information in memory, detecting patterns, and making predictions (creating expectations) based on those patterns. And we have System 2 which can evaluate those predictions and use logic to decide whether they probably do apply to the current situation, or whether some other factors need to be considered.

How does all this apply to square dancing? Parts of it can apply to virtually any aspect of square dancing, but we will look specifically at Designing Choreography, Teaching, and Sight Calling.

Designing Choreography

The Dancer Perspective

MWSD is unique in that the dancers don't know what is coming next. In most dance forms, dancers learn a dance and practice dancing it to the music. In MWSD, the objective is to dance unrehearsed material to the music. Given the tempo at which we dance (typically 122-130 BPM), this requires dancers to make split second evaluations and decisions in order to decode the calls and dance smoothly. This is definitely a System 1 job. When dancers are first learning, these tasks are being performed by System 2, which makes execution slow and accounts for why dancers working with something new usually cannot perform to the music. As the dancers gain practice with the material, it gets embedded in System 1, where it can be executed automatically and to the music. For these experienced dancers, the process looks something like this:

1. **Context:** Through its constant monitoring, each dancers' System 1 knows the general <u>context</u> of the situation at all times:
   a) CL Program in use (Many might dispute this, but dancers do adjust their expectations of what calls they might hear based on what program they think they are dancing. Calling Teacup Chain on a C-1 floor will cause a great deal of breakage, but the same dancers would execute it without problem on a Plus floor. At C-1 they do not expect to hear it.)
   b) The call in progress and, eventually, after they have moved far enough through the call, a prediction (expectation) about:
      (1) what the result formation will be and where they will be in it.
      (2) what their body flow will be at the end of the call,
      (3) what their hand availability will be.
   c) What calls the current caller has tended to use in similar situations recently.

2. **Candidate List:** System 1, using its associative memory on the information in the context, generates a list of potential calls that the dancer might hear next. The dancer is not usually aware of this "pre-fetched" candidate list.

3. **Instruction:** On hearing the call delivered by the caller, System 1 compares it to the candidate list. If it's found there, System 1 ships the "answer" back to System 2 with a strong endorsement that the answer

Great Expectations … cont'd

is right. That answer consists of a mental model of how the call works from the dancer's position in the formation. If the call is not in the candidate list, System 1 performs a new search to associate the call with the current context and retrieve the appropriate mental model to return. If the search is successful, the answer is returned to System 2, but with an accompanying impression of surprise: the call was unexpected. If the second search is unsuccessful, or only partially successful (i.e. it's recognized but no mental model of how to execute in the current context exists), that information is also returned to System 2.

4. **Validation:** System 2, receives the answer from System 1 and determines whether to act on it. If the recommendation from System 1 is strong (i.e. the call was in the "pre-fetch" list) System 2 will execute without further checking. In this case, the dancer will move smoothly and effortlessly into the call execution. If the System 1 recommendation is strong but the call was unexpected, System 2 will "sanity check" the answer, but probably act on it. The dancer will experience this as a slight hesitation, but will still execute with confidence. If the System 1 return amounts to "call unknown – or at least unknown from here", then System 2 will attempt to do a stepwise reasoned application of the rules of the call to the current context. This will almost never happen at dance speed.

Now Let's Apply That

If that is what is going on in dancers' brains as they dance, what does it imply for us as we design choreography? That depends on our objectives for the particular choreography we are fashioning. Let's start by stipulating what should always be there – those elements we tell new callers to strive for when we teach at a caller school: pleasant body flow, natural hand usage, using natural momentum to assist dancers in moving from one call to the next. But beyond that, we may have different objectives at different times. Sometimes we want the dancers to dance smoothly and effortlessly without needing to think too much. Sometimes we want to challenge them with puzzles. Sometimes we want to entertain them with games or humor. How does this new mental framework help us in crafting choreography to meet those objectives?

Managing Difficulty

Most of these objectives involve careful management of the level of difficulty. This framework gives us an interesting viewpoint on what contributes to difficulty:

◆ The instantaneous context in which the dancer is operating (that amalgam of factors such as CL program, recently used calls, habits of this caller, attributes of the call in progress, etc.) contributes heavily to what calls System 1 might "pre-fetch" as likely to come next. The caller can manipulate that context to make what comes next either easier or harder for the dancer. Something as simple as prefacing the call with "careful", or even putting that tone in your voice, is enough to alter the context and change the way System 1 and System 2 interact to deal with the situation.

It is important to bear in mind that the individual dancer's level of training, experience, and general competence is definitely the most important element of this context.

◆ Dancers will perceive as "easy" calls which System 1 "pre-fetches" and returns to System 1 with a strong endorsement. System 2 will usually do little validation and accept the recommendation. As the length of the string of accurate recommendations increases, the dancer gains confidence and feels they are on top of what is going on. Since this processing is entirely System 1, it feels effortless and automatic to the dancer. At some point, the attention of System 2 may wander, since no demands are being placed on it. The dancer is now on "auto-pilot". If the dancer continues to be successful in this state, they may start to feel the choreography is boring (although there may be other redeeming qualities such as the sensation of moving to the music, the pleasure of acting synchronously with a group, etc.) If the dancer suddenly fails because System 2 did not catch a bad recommendation from System 1, they may feel "tricked", "sand-bagged", or "led down the garden path".

◆ Dancers will perceive as "interesting" or "creative" calls which System 1 returns with an impression of surprise: calls which were not in the initial "pre-fetch" list and required an additional search. Since an element of surprise accompanies the answer, System 2 spends more time sanity checking the answer. If the answer "passes" the validity check – that is, System 2 decides it's right – then the dancer experiences

Great Expectations … cont'd

a momentary mental hesitation, and the realization things are happening that may not always be done on "auto-pilot".

◆ If System 2's validity check decides that System 1's answer is in fact <u>wrong</u>, or the answer is not complete enough to permit execution, then the dancer perceives the call as difficult – even if they are ultimately successful with it. System 2 will now evaluate the rules of the call against the current context in an attempt to find a previously unencountered solution (i.e. not already in memory). This takes conscious effort on the part of the dancer and will probably result in their stopping, at least momentarily. Even if they do not physically stop moving, they will mentally experience a significant interruption in flow. If they succeed in solving the problem, they will feel a sense of achievement, and the solution will be added to their repertoire. If they fail, it will add to whatever sense of frustration may be building.

Some Examples

◆ From an 8Chain, normal arrangement:
  ▪ Easy: pass thru, touch ¼, slide thru, …
  ▪ Harder: pass the ocean, box the gnat, turn thru, centers in
◆ From ½ waves, Girls Fold:
  ▪ Virtually the <u>only</u> thing dancers know from there is Peel the Top
  ▪ Even a trivial change such as Girls Fold, Boys Trade, Peel the Top would probably be unsuccessful
  ▪ From right-hand waves where Extend → RLG; Girls Fold, Boys UTB, AL becomes a surprise getout that will likely work.

Creative vs "Tricky"

From our discussion so far, we can see that choreography most likely to be considered "creative" by the dancers would be:

◆ Something executed entirely by System 1 but having an unusual result – a surprise, but easy. (e.g. Star Thru resulting in Lines Facing Out – especially if immediately followed by something to create facing lines).

◆ Something mostly executed by System 1 but producing a result easily flagged by System 2 as needing slight additional processing – slightly puzzling, but still easy. (e.g. Left Swing Thru from right-hand waves).

◆ Something only partially executed by System 1 and requiring System 2 to analyze the situation and apply the rule of the call – perceived as difficult, but if the result is unusual, still interesting. (e.g. DoSaDo & Veer Left from Facing Lines)

The line between "creative" and "tricky/unfair" can be very thin. Its exact placement depends more than anything else on the dancers' perceptions of the caller's attitude towards them. A caller who is perceived as trying to one-up the dancers or prove how much he knows, will be given much less leeway than a caller who is perceived as trying to work with the dancers to give them an entertaining time. We know from previous discussion that a call processed entirely by System 1 and returned with a strong recommendation, but which turns out to be wrong, is most likely to be perceived as unfair. That is because the dancers felt certain they understood, but were rudely surprised. If the dancers receive this as a "dirty trick" they will not be happy. But if the caller sets the correct context ahead of time – one which lets the dancers consider the event to be part of a game or joke (not on them), it might be perceived as creative or humorous.

Teaching Dancers

As we have seen from earlier discussion, an essential element of the <u>context</u> in which calls are processed by System 1 and System 2 is the dancers' understanding – or mental model – of the call. This mental model is the result of the initial teaching experience plus all the additional dance experience since the teach. Clearly, the effectiveness of the initial teaching experience is a huge contributor to the dancers' future success with the call. More generally, dancers form a mental model for the generic processing of a call – what are the generic steps to go through in order to successfully execute <u>any</u> call?

Great Expectations … cont'd

What I am about to describe will seem ridiculously complicated at first – and it is indeed not simple. But it is actually what is going on, to one degree or another, for every dancer. I would venture to say almost no dancers are taught in the terms I am about to describe, but dancers unconsciously internalize principles such as these while learning the calls. The principles they internalize will be a function of how they are taught, the way the calls are described to them, and the way they are trained to think about formations. Bear in mind that, given the proper training, System 1 is capable of absorbing and then effortlessly executing very complex processes that require extensive information processing. However, once an inadequate version of a process has been embedded in System 1, changing it is extremely difficult.

Decoding Calls

To make decisions about how best to teach, we should first consider what a dancer needs to do in order to execute a call when they hear it. These are the generic (i.e. apply to any call execution) steps (mostly executed by System 1 for an experienced dancer):

1. Retrieve from memory the number of people required to do the call.
2. Retrieve from memory the formations those people might possibly be in (e.g. facing couples, diamonds, ocean wave, columns, trade by, etc.)
3. Examine the square setup to find the formation in which to work. For example, if the call was Scoot Back, at this point the dancer has determined that 4 people are involved and that they may be arranged in a mini-wave box (let's assume for the moment the dancer has never seen the ¼ tag version). Such boxes could occur in a number of overall square formations, for example parallel waves or columns. In addition, the caller may have specified that only a subset of the square was active by saying "Center Box". So, after factoring all this together the dancer now knows what box of 4 to work in.
4. Retrieve from memory the roles that are described in the action of the call – is it described in terms of leader do this, trailers do that? Or ends do this, centers do that? Belles, do this, beaus do that? What does the dancer have to identify themselves to be in order to determine what they do?
5. Determine what role they are executing based on their position in the operating formation.
6. Retrieve from memory the action the dancer executes for the role they are playing. This might include styling or traffic pattern elements.
7. Start moving.
8. As the call completes, if it involved groups smaller than all 8 dancers, retrieve from memory how the groups should align with one another to create the resulting "all 8" formation. For example, if the call was Cast Off ¾ from columns, the dancers need to understand that all the two-person groups wind up shoulder to shoulder in a tidal wave.
9. Retrieve from memory what the rolling and sweeping momentums will be in case those calls are added.

Listed out this way, the steps seem daunting. But they are indeed executed for every call, admittedly with widely varying degrees of flexibility. They are executed by System 1 in fractions of a second.

Teaching Call Decoding – the Sneaky Way

If you are thinking that teaching the above steps to new dancers as the way to learn a call would be a complete non-starter, you are absolutely correct. Nobody would make it past lesson one if we taught these steps – explicitly, at least. Fortunately, they can be taught without actually being taught. If we teach calls with a consistent pattern, System 1 – pattern-matcher extraordinaire – will figure it out automatically.

Let's look at the call Scoot Back and see how it might be presented so that it maps against our nine decoding steps, without actually talking about the steps:

1. Explain the call:
   a) The name of the call is Scoot Back
   b) It is done from a box of 4 with some looking out of the box (leaders) and some looking into the box

Great Expectations … cont'd

(trailers). (Save the ¼ Tag version for later)

    c) Action:

      (1) trailers step forward, trade using inside hands, and step forward to take the place of the person beside them in the box

      (2) leaders run into the position beside them in the box.

    d) At the end of the call the box will be in the same position as at the beginning of the call.
(Note all this presumes that at this point dancers are familiar with the concepts, if not the words, of leader/trailer, inside hand vs outside hand, and know where "beside them in the box" would be)

2. Do the call first with just the heads/sides in the center of the set, with different leaders/trailers

3. Do the call from right-hand waves, with different leaders/trailers

4. Talk about the center box of 4 (still in rh waves). Point out that it is a left-handed box of 4 and those dancers could Scoot Back. The rules of the call are the same, but it will feel different because the center box is left-handed. Do the call in the center box, with different leaders/trailers.

5. From right-hand waves do the combination Scoot Back, Center 4 Scoot Back, Scoot Back until it is smooth.

6. Switch to left-hand waves.

7. Go to right-hand columns, explain the perceptual problem for the centers who are actually leaders in their own box. Drill again from there.

The template for the call that this process embeds in the dancers' System 1 is generic and flexible, focuses the dancer on the group they need to work with, does not condition the dancer to expect to be in any particular place in the box, does not condition the dancer to think about right/left (instead they think inside/outside), and accustoms them to being able to switch boxes quickly.

Lets contrast that with what is often the method for teaching Scoot Back:

1. Heads Square Thru 4, and All Touch 1/4

2. Boys go in with a right hand, trade with each other, and step back out to stand where the girls are standing now; Girls run into the Boys position.

What template has that embedded into System 1?

◆ It's a Boys/Girls call, its parts are defined in terms of sex.

◆ It's done from parallel waves

◆ It's right-handed

Very few repetitions of this will cement the call in the dancers' memories with these attributes, making it much more difficult for them to acquire other variations.

By adopting a fairly simple formula for teaching, we can arm our dancers much more thoroughly for what they might see in the wider world.

1. Always name the call first – this gives the dancers a memory-tag to associate all the information with

2. Always tell them how many dancers are involved in the call.

3. Always tell them what formations those dancers might be arranged in – and if the call uses less than 8 dancers, where those formations might be found. If you're only going to work with one formation to start, tell them that there are others and you'll show them later.

4. Always teach the minimum formation first.

5. Always describe the action in terms of the real roles – leader/trailer, belle/beau, center/end, etc.

6. Endeavor to find the balance between repeating a position often enough to solidify understanding and repeating one position so much the dancers have trouble transitioning to another position in the call.

This approach builds a robust mental template for the call that will serve the dancers well in their dance careers. Dancers with such a template will find a wider range of material "easy" and will be able to handle "interesting" material without breaking down. Their System 1s will serve up strong recommendations most of the time, permitting smooth dancing in time to the music. They will enjoy their dancing far more.

Sight Calling

Sight calling is a classic example of System 1 at work. Let's look at it from two angles: sight resolution, and extemporaneous choreography.

Sight Resolution – Finding Your Way Home

Despite the many different "systems" of sight resolution that have been documented over the years, stripped to their essentials they all boil down to this:

- ◆ Recognize a pattern of dancers and apply a memorized getout.
- ◆ If you don't recognize the current pattern of dancers, maneuver the dancers until you do.
- ◆ This "engineering" process also involves pattern recognition – who is paired, what is the sequence, etc. - and actions associated with each pattern that incrementally maneuver the dancers closer to the pattern from which a getout is known.

Granted, there are many different sorts of embellishments, but, at base, this is what they all do. Most of the differences rest in the strategies employed to create the recognizable pattern.

Recognizing a pattern (dancers in a formation) and rapidly serving up associated information (memorized getouts) is classic System 1. At callers' schools we have all watched students wrestle with doing this. At first it takes them many seconds – many more than continuous dancer movement allows – to recognize what they have and remember an associated getout. That is because they are using System 2 to analyze what is in front of them and apply a set of rules to determine what to do. That is a very slow process in square dance terms – something that takes seconds, when split-seconds are required. In order to become capable of performing this feat at dance speed, a caller must perform it often enough to drive it down into System 1. Once System 1 acquires it, the "answers" will seem to magically appear without conscious effort.

Let's look at how a fledgling caller can use this understanding to gradually build their sight resolution skills. We're only going to look for our memorized pattern in one formation: an Eight-Chain Thru setup with Normal couples, however this same line of reasoning can be applied to any formation commonly used in sight resolution. Here is the "method" as it might be explained to a student caller (note: PM = Primary Man, CL = PM's Corner Lady):

1. Create a Beginning DPT formation, all normal couples, with your primary couple paired on the outside.
2. Bring your CL to face PM – this will be either a Centers Pass Thru, or a Centers Square Thru 3 (or equivalents). This creates only two possibilities; the caller must recognize which one and retrieve a memorized getout to resolve the square.
   a) If CL is not with her partner, then AL (or equivalent)
   b) If CL is paired with her partner, then Swing Thru, Turn Thru, AL (or equivalent).

Step 1 above actually requires quite a bit of work, which some method descriptions explain how to do, while others just assume the student can figure it out. In the interests of brevity we'll take the latter course. But bear in mind that Step 1 would have its own series of patterns to be recognized and associated with actions (e.g. where are primary man and his partner – what calls would put them together, then what calls would bring them to the outside of a Beginning DPT while preserving their pairing?). Those steps can be subjected to the same analysis used below. The essence of the approach is to require a choice between only two options at each decision point.

By successfully completing Step 1, the caller has actually reduced the number of possibilities to four. For a new caller, that might still be too many to cope with at dance speed, so Step 2 is used to reduce the possibilities even further. Step 2 requires the caller to recognize a pattern, where the CL is, and associate a call with that pattern that will result in CL facing PM. After completing Step 2, the caller then has one final "either this or that" pattern to recognize.

Once the caller has practiced this enough times for System 1 to own it, it will become automatic and easily done at dance speed. At that point, the caller can gradually expand their repertoire by making small incremental additions.

Great Expectations … cont'd

◆ Instead of finishing Step 1 with a Beginning DPT, take it right to the Eight Chain without the intervening snapshot of where CL is. So, at that point, the PM is paired with partner on the outside of the Eight Chain and they are looking at a Normal couple on the inside. This setup has four possibilities to choose from: two of them are the same as before (the two where PM is facing CL), but two are new. The increase in difficulty lies in having to recognize four cases (patterns) and remember the getout for each one. The benefit lies in not having to apply additional calls to whittle down the number of possibilities to two and being able to resolve sooner.

Once this is mastered, the caller can determine a getout from any normal Eight Chain where primary couple is paired on the outside.

◆ The next series of increments involves changing who PM is paired with on the outside. This requires some new abbreviations to be introduced: PL is Primary Lady, and CM is Corner Man (CL's partner). The easiest next step is to pair PM with CL on the outside of the normal Eight Chain, which creates an entirely new pattern – but the process remains the same. There are only four possibilities for the couple facing the PM: PL&CM, PL&notCM, notPL&CM, notPL&notCM.

Mastery means being able to recognize which of the four is present and recall a getout for it – at dance speed.

◆ The above exercise can be repeated for Opposite Lady (OL) and Right Hand Lady (RL): pair PM&OL or PM&RL on the outside and memorize getouts for each of the resulting four possibilities of inside couples. For these cases, recognition of the patterns is significantly harder because the ladies being paired with PM are not "known" - they were not in the half of the square the caller noted to keep track of. However, they can be identified by looking at their opposites (PL's opposite is OL, CL's opposite is RL). In theory, this should not be hard, but in practice it represents a severe distortion of the pattern and is hard to make automatic. However, the caller who perseveres through all these steps, can now resolve from ANY arbitrary normal Eight Chain setup.

At the end of this handout is a page of Getout Tables that show all the instances generated by the process discussed above.

Extemporaneous Choreography – Winging It

Most discussions of Sight Calling are actually discussions of Sight Resolution and do not speak to the vast majority of time when the caller is not trying to resolve. But, as with resolution, there is a significant amount of pattern recognition and associated recall going on while "free wheeling". Unlike Sight Resolution where the patterns to be recognized are primarily about dancer placement, the patterns involved in general sight calling are considerably more complex. The elements involved include:

- ◆ The formation and arrangement
- ◆ The momentum and rotation of each dancer resulting from the last call
- ◆ The CL Program being used
- ◆ Dancer capabilities
- ◆ Standard applications
- ◆ Recently used calls
- ◆ Degree of difficulty desired
- ◆ Space available to dancers
- ◆ What calls could follow the result
- ◆ etc.

This is an extremely demanding task, mostly handled by System 1, but mediated by choices made by System 2. Let's look more closely at the process that is going on. Let's imagine that starting with normal right-hand waves (boys on the end) you have called Swing Thru, Spin The Top. What might the interaction between System 1 and System 2 for choosing the next call look like?

1. **Context:** Through its constant monitoring, System 1 knows the general context of the situation at all times:

Great Expectations … cont'd

   a) CL Program in use (let's assume Mainstream)
   b) Standard Applications (both documented and what this floor has shown it can cope with)
   c) Dancer capabilities (an opinion you have formed through watching them dance)
   d) The result formation (right-hand Tidal Wave, girls in the center of each side), and the momentum and rotation of each dancer resulting from the Spin The Top.
   e) System 1 has an impression of what calls you have recently followed this with (within the last several sequences).

2. **Instruction:** System 2 makes a choice that the next call should be something the dancers will find simple and dance smoothly. That is passed to System 1 to be added to the context for choosing the next call.

3. **Candidate List:** System 1, using its associative memory, serves up a list of calls which satisfy all the constraints represented in the context and the System 2 instruction: (Mainstream, standard application, will flow well out of Spin The Top, etc). That list might be something like:
   a) Right and Left Thru
   b) Slide Thru
   c) Hinge
   (Note that these calls will be served up by System 1 with their result formations)

   It is interesting to note that the candidate list is heavily affected by the CL Program in use. It seems obvious, of course, that it should not include calls that are beyond the program in use. However, calls that are known to the dancers but in less frequent use in the program being called will probably not be included either. For example, at C-1 calls such as DoSaDo, Walk Around Your Corner, and Weave the Ring would not normally appear.

4. **Selection:** System 2 chooses one – say Slide Thru

5. The process repeats for the resulting Eight Chain Thru formation.

Now, let's suppose that the Instruction from System 2 to System 1 in Step 2 had been to find something unusual. What might the Candidate List have been then? Perhaps: Turn Thru, Box The Gnat, or Cast Off ¾?

The point to bear in mind is that the vast majority of the processing is happening in System 1 – otherwise you could not do it at dance speed. This means that you have to embed in System 1 the information – the memories – necessary to do this processing. You have to really know your calls: how they work, how they relate to other calls, how they feel to the dancers, and what their choreographic effects are

Summary

As we call, we are, whether intentionally or not, setting up patterns in our dancers' minds, which in turn cause them to have expectations about what is going to happen next. By being aware of how dancers' brains are responding to them we can use those expectations to both educate and entertain our dancers.

By teaching in a way that maps to the way dancers need to process calls, we condition them for success, for being smooth and confident dancers.

By being more aware of the expectations we are setting up in our choreography we can more often surprise and delight dancers with something unexpected and novel, yet danceable.

And this understanding of how System 1 and System 2 interact to detect patterns and create expectations, can no doubt be applied to many other elements of our square dance activity: programming, music selection, caller training, event planning – wherever your imagination might take you.

Great Expectations … cont'd

Getout Tables
Key Man on Outside of a Normal Arrangement 8-Chain Paired With:

Partner

Inside Pair (Girl + Boy)	Getout
Corner + CornerPartner	Swing Thru, RLG
Corner + Not CornerPartner	AL
Not Corner + CornerPartner	Square Thru 3, Trade By, AL
Not Corner + Not CornerPartner	Swing Thru 3 Times, RLG Facing Recycle, RLG

Corner Lady

Inside Pair (Girl + Boy)	Getout
Partner + CornerPartner	Square Thru 3, AL
Partner + Not CornerPartner	Recycle, Extend, RLG
Not Partner + CornerPartner	Swing Thru, Extend, RLG
Not Partner + Not CornerPartner	Dixie Grand, AL

Right Hand Lady

Inside Pair (Girl + Boy)	Getout
Partner + CornerPartner	Swing Thru, Circ 1&1/2, RLG
Partner + Not CornerPartner	Pass Thru, AL
Not Partner + CornerPartner	8-Chain 2, Square Thru 3, AL
Not Partner + Not CornerPartner	Slide Thru, Pass the Ocean, Swing Thru, Circ 1&1/2, RLG Swing Thru Twice, Recycle, Pass Thru, Trade By

Opposite Lady

Inside Pair (Girl + Boy)	Getout
Corner + CornerPartner	RLT, AL Slide Thru Twice, AL Double Star Thru, RLG Pass the Ocean, Swing Along, RLG
Corner + Not CornerPartner	Square Thru on 3 Swing Thru, Circ, RLG Split The Outsides Around 1 to a Line, Fan The Top, RLG Touch ¼, Girls Trade, Slide Thru, Square Thru 4, AL
Not Corner + CornerPartner	Swing Thru, Circ, RLG Touch ¼, Girls Trade, Left Square thru 2, AL
Not Corner + Not CornerPartner	Pass Thru, Trade By, AL Spin Chain Thru, RLG

Once you have memorized getouts for all 16 possibilities, you can resolve from <u>ANY</u> normal arrangement 8-Chain formation with your key man on the outside.