

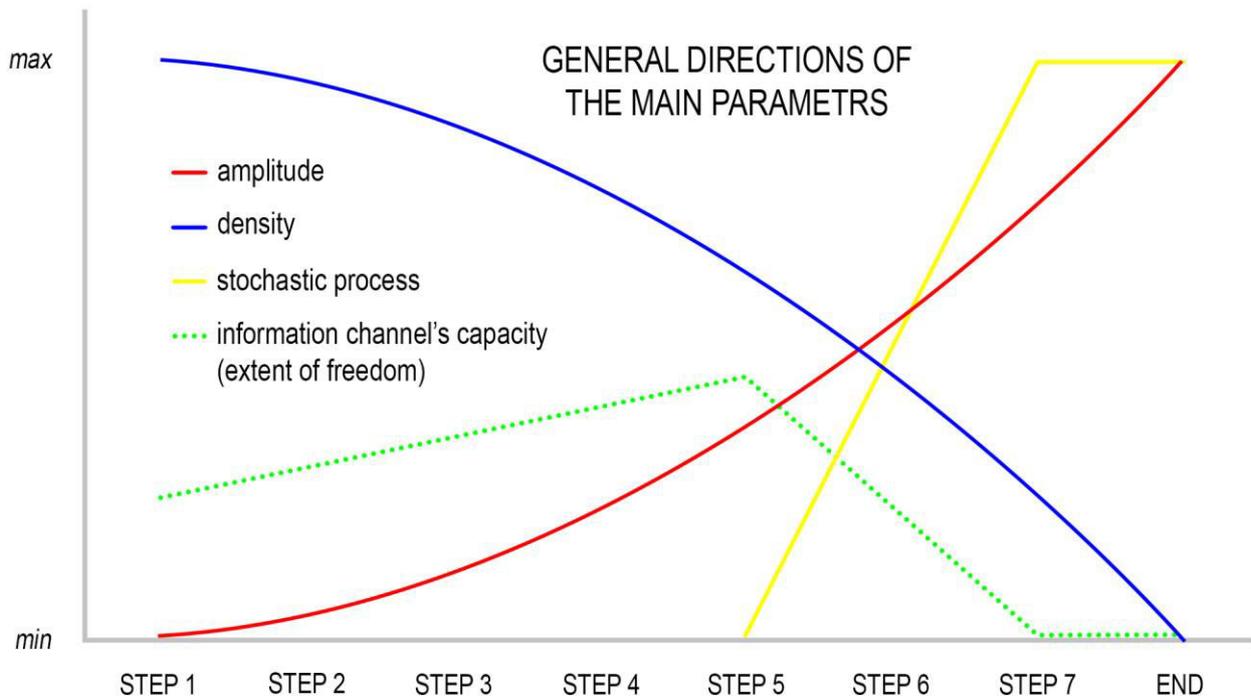
# SEVEN STEPS THROUGH THE INFORMATION CHANNEL

*for a minimum of 2 improvisors on any instrument.*

This work aims to make the improvisor aware of the ways and the extent to which the physical properties of the instrumentation, collective dynamics, and predetermined strategies affect the ability to communicate freely in an ensemble.

Any improvisor deals heavily with the ability to share and receive information to and from the other elements of the ensemble. The information channel's medium is sound, and sometimes visual elements (a head cue, a sight, etc.)

In this piece, a set of general directions is given. These directions are a screenplay for the main focus of the work, which is the relationships among the improvisors and how the relationships develop. The directions will affect the modalities in which the ensemble can share ideas collectively, thus they will shape the information channel's capacity.



The solid lines are the directions the musicians should follow, while the information channel's capacity is dotted because it is only the result of the other indications: if the musicians play the piece correctly, they can ignore the green line.

This work is a continuous process, although keeping an ensemble synchronized through these abstract directions can be a complex goal. Therefore, for practicality, the piece is divided into 7 steps. The ensemble can either use a stopwatch (about a minute per step can be a good starting point) or a player can keep the timing and give cues when it's time to move on to the next step.

## Information channel's capacity

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In this work, the information channel's capacity is defined as the extent of freedom a musician has to propose and receive any idea. The spectrum ranges from the most responsive form of interplay, in which musicians exchange a lot of information (maximum capacity), to a stochastic process, in which musicians should behave like human unconditioned random generators and have to avoid being affected by what they hear (minimum capacity). Thus, the capacity should be thought of in terms of collective relationships instead of individual freedom, since a musician asked to play like a random generator will have to make decisions about musical parameters like what pitch to play within a fixed range of possibilities, but they won't influence or be influenced by the other musicians' decisions.

## Amplitude-density scissor

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Loudness and density are inversely proportional. This instruction overturns the common improvisatory dynamic for which when improvisors play fast, with a lot of movement and a lot of ideas sharing, they also play louder. This moment is also generally associated with the loss of control.

The amplitude-density scissor prevents this dynamic from happening. The improvisors will have to find alternative ways to develop a tight and frenetic dialogue using the quietest sounds they have on their instruments. Keep in mind that in an improvisation ensemble, you should always be able to hear even the quietest sound. Then, when the improvisors will be playing with their instrument's standard dynamic range, they'll have to establish a respectful and balanced dialogue, avoiding imposing ideas that could be totalizing for the ensemble. This dialogue will be gradually impaired and annihilated by the development of the piece in its last steps.

## Stochastic process

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At the end of the work, a stochastic process (yellow solid line) is gradually introduced over the improv session and the players should be familiar with the idea that traditional chance operations require a complete annihilation of any interplay and personal communicative instances. Here the improvisor is asked to work with the amount of information shared as a musical parameter; this is essential to create a gradual transition from a phase where the interplay is the dominant aspect to a phase in which probabilistic rules replace the interplay and annihilate the communication among the improvisors.

## Step 1

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Dynamic: *p*- (barely audible)  
Density: highest

Play as in a frenetic dialogue. Quick give and take, excitement, move fast your hands, but play at a barely audible volume, as if someone had stolen your instrument's voice.

Many instruments don't allow you to play pitches at such a low dynamic (piano, sax, etc.), so use the sounds produced by your instrument when your hands are flying on it, but the touch is too soft to let a note come out: the sound of the hand sliding on the harmonic table of a guitar, the sound of the mechanics of a piano hammer which goes down but doesn't have enough force to hit the string, the sax keys and the breath which is so weak that doesn't let the air column vibrate.

If the sounds are too quiet for you to understand what's going on, listen more carefully, and look at the body language of the other musicians: try to share as much information as you can with the barely audible sounds the group is allowed to use.

N.B. Frenetic dialogue doesn't mean that you have to play all the time.

## Step 2

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Dynamic: from *p*- to *ppp*  
Density: very high

Gradually introduce errors in the dynamic. Don't try to create them intentionally. Look for that threshold of loudness where errors happen: that dynamic where it is too hard to play the piano keys without letting the hammer hit the string, or that amount of breath where the note barely starts to come out. *Give importance to these mistakes as a structural part of your improvisation, either your own or the ones happening around you.* When possible, use techniques that make the escaped note more noticeable (e.g. on the piano, keep down the sustain pedal).

### Step 3

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Dynamic: from *p*- to *p*  
Density: high

Now the dynamic range allows you to play your instrument as it was intended to. It is essential to make this transition smooth, so don't go directly from unvoiced sounds to all regular ones. Keep playing quietly, and start playing as you're talking in a balanced dialogue.

### Step 4

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Dynamic: from *ppp* to *mp*  
Density: medium

*Play as in a balanced and articulate dialogue.* Never go too fast or play too loud; listen to the ideas proposed and propose ideas yourself. Here, you have the maximum freedom of expression the piece allows you and the highest information channel capacity: you can use the normal dynamic range of your instrument and you can play as in a normal improv session. Just avoid polarizing ideas, those that imply that everyone should follow you (e.g. avoid taking a rhythm or a theme and play it for the entire duration of the section. NB: *using rhythms and/or melodies is not forbidden*)

### Step 5

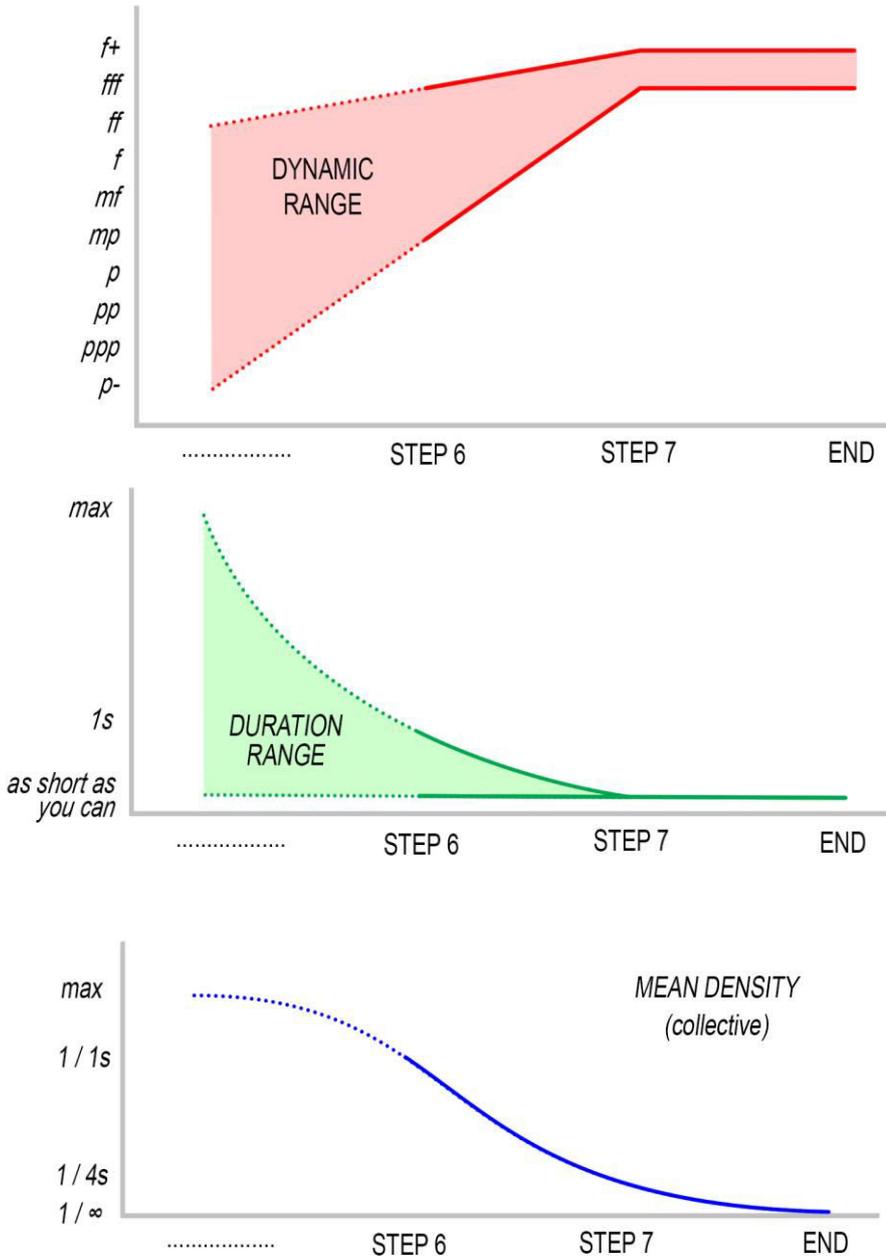
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Dynamic: from *p* to *mf*  
Density: low

As you play louder, your interventions become shorter and sparser. The capacity to communicate fluently starts deteriorating as a result of the time limit of your intervention and their sparse placement in the space. This step marks the beginning of the phase that develops from step 5 through the end of the piece: a gradual shift from an improv session to a phase governed by stochastic rules. In other words, a smooth transition from a phase where communication is the most relevant element to a phase where communication is completely forbidden.

If you follow correctly the amplitude-density instructions, in this step, you don't have to worry about the stochastic process. Just set your mind towards the idea that your interventions will soon become separated from your intuition.

The stochastic process can be formalized as follows.



The coloured part is the range the musician can use (y-axis) according to the step (x-axis). The dotted parts are not meaningful for the piece, since the stochastic process starts to be a factor from step 6 to the end.

The mean density values refer to all the sounds produced by the group, so if the group plays about one sound every 4 seconds and there are 4 musicians, each musician will play 1 / 16s (one sound every 16 seconds).

The value indicates an average, so if you have to play 1 / 16s, it means that you are free to play a sound after 1s as well as 32s, as long as the long-term average is about 1 / 16s.

## Step 6

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Dynamic: from *mp* to *fff*  
Density: sparse

As you play even louder, your interventions become even shorter and sparser. Play impulses within a *mp* to *fff* dynamic range, start disregarding the interplay and start thinking in terms of probability. Refer to the diagrams in step 5 for a more precise definition of the probability rules.

## Step 7

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Dynamic: *f+* (as loud as you can)  
Density: from sparse to approaching infinity

Annihilate any expressive instance. Play very sparse, impulsive points, according to probability rules and no other musical logics such as interplay, intuition or linear development. Don't listen to what the others are playing. If there is a big difference in terms of maximum loudness among your instruments, the silence length will be proportional to the loudness of your sounds (e.g. if a trombone and an acoustic guitar are playing, the trombone will play sparser than the guitar but do not try to adjust your loudness to the quieter instruments).

From this point to the end, keep enlarging the space between the sounds, till they are so sparse that silence is predominant. *Keep enlarging the space till the sense of waiting takes over.*

End *ad libitum*.