

# “Twelve-Tone Music Reloaded”: 12 Lessons in Rotating Leadership and Organizational Development from Jazz

**Peter A. Gloor, Daniel C. Schmid**

a MIT Sloan Center for Collective Intelligence, 245 First Street, Cambridge, MA 02142.  
pgloor@mit.edu

b HWZ University of Applied Sciences in Business Administration Zurich, 5 Lager Street,  
8044 Zurich, Switzerland. daniel.schmid@fh-hwz.ch

**Abstract** This paper illustrates the core principle of COINs (Collaborative Innovation Network) of rotating leadership by the example of Jazz musicians, who take turns grooving together. These musicians are exemplars of team members seamlessly transferring the leadership role from one to the other, leading to a “flow” experience of superb quality for their audience. As we show, so-called “honest signals” from Jazz can play a key role for organizational development to create an “organizational groove”.

## Introduction

In the past twenty-five years, Jazz has enjoyed increasing popularity as a metaphor for collaborative Organizational Development, functioning team roles and leadership structures (Weick 1999, Kamoche et al. 2003, Burow 2004, De Pree 2008, Barrett 2012). Based on the revolutionary field theory of Kurt Lewin (Lewin 1997), Peter Senge's ground breaking study of the learning organization (Senge 2006), and Ed Schein's decades of work about organizational culture (Schein 2017), the success of the metaphor seems not only to be a counter-movement towards top-down leadership approaches. It's also been motivated by the fact that jazz is a social phenomenon in which improvisation is much more salient (Kamoche et al. 2003). Recently, Jazz improvisation has become a part of the “Holy Grail” in Organizational Development, above all under so-called VUCA (volatility, uncertainty, complexity and ambiguity) conditions (Johansen 2012). Effective leadership of the future will be based on relationship building, understanding complex group work, and diverse workforces. For future leaders, it will be key to gain a deeper understanding

of the constantly evolving complexities of interpersonal, group and even intergroup relationships (Schein 2018).

Rotating leadership is one of the key tenets of Collaborative Innovation Networks (COINs). COINs are small groups of intrinsically motivated people who get together to create something radically new. While earlier research on COINs demonstrated the need for strong leaders (Nemoto et al., 2011), a COIN with a single leader stagnates and loses its innovative spark (Kidane & Gloor 2007). High functioning COINs have multiple leaders who take turns providing leadership according to their skills and strengths. They are as willing to step back when somebody else is more qualified for a task, as they are willing to step up when they see the opportunity to contribute their expertise and capabilities.

Cooperation among Jazz musicians is an exemplar of rotating leadership (Gloor et al. 2013). In earlier work this has been researched using sociometric badges, body-worn devices that record the body signals of the musicians. In this paper we first discuss key principles of rotating leadership at the example of two ragtime pianists, Tom Brier (<https://www.last.fm/music/Tom+Brier/+wiki>) and Adam Swanson ([www.adamswanson.com](http://www.adamswanson.com)), complementing them with five more general lessons for organizational design derived from Jazz musicians.

Tom Brier and Adam Swanson are well known in the field, having won different prizes, and having performed at many festivals. Both of them also started as child prodigies, discovering their calling as professional ragtime pianists early on in their lives. Over the years both had been performing and competing at different festivals across the US. In this paper we would like to focus on two YouTube videos recorded in 2008 and 2010, where Tom and Adam out of the blue began playing the “chopsticks” rag together. The first time this happened at the 10th Sutter Creek Ragtime Festival (<https://www.youtube.com/watch?v=H-8bSZa4Fjg>), the second time was at the West Coast Ragtime Festival (<https://www.youtube.com/watch?v=ku2r8HdKong>).



Figure 1. Tom and Adam grooving at the West Coas Ragtime Festival 2010

The first time, in 2008, Adam had been playing the first few bars of “Chopsticks” as a joke, not knowing how Tom would respond to it. Also, at that time, Adam did not know the full “chopsticks” rag after the first few bars. Tom took up the challenge and started playing. Adam had to pick up the tune and learn it on the fly. The second time, in 2010, Adam was well prepared, and Tom and Adam started grooving for 9 minutes, as recorded in the video. In the 2008 event, Adam turned “chopsticks” first into the “Tim Baileys” rag, and then, both in 2008 and 2010, into the “Tiger Rag”. Along the way, Tom and Adam switched keys on each other, thus creating brief periods of dissonance, before getting back into synch. In their mutual interplay, Tom and Adam wonderfully illustrate the key principles of rotating leadership:

1. They are seamlessly passing control from one to the other
2. Whoever has a creative idea, takes the lead, and the other follows
3. They are masters of their profession
4. The one who knows less learns from the master
5. They play and synchronize by ear
6. Competitive collaboration leads to the perfect product
7. They do it for the fun of it!

These seven key lessons in rotating leadership from the two ragtime pianists, Tom Brier and Adam Swanson can be transferred into the broader organizational perspective. The main challenge if we want to consider Jazz as a possible metaphor for leadership development in organizations is that many of the decision makers might have never been on stage and probably do not know about stage fright, lack

of technical infrastructure, or the worst, bad vibes in a band. One of the authors has worked professionally for several years with international Jazz musicians such as Dave Brubeck, Ray Brown, Kenny Barron, Jim Hall, and many more. Based on this experience the five following factors had the greatest impact on him as a Jazz aficionado before and behind the curtain:

8. Be prepared
9. Learn to listen
10. Let it flow
11. Reduce to the max
12. Be modest

Above all, these five key principles are completely analog and can be identified as “honest signals” (Gloor et al. 2013). So, in order to create a rotating leadership environment, these success factors can be aligned directly with the seven key principles we have learned before from Tom and Adam while playing together “Take five”!

Let’s now look at each of these twelve lessons in detail, starting with the insights gained from observing Tom and Adam:

### **1. They are seamlessly passing control from one to the other**

In each of the two improvisation sessions, Tom and Adam are switching the lead at least half a dozen times. Thanks to this rotation in leadership, creativity is flourishing, with unpredictable, but highly enjoyable and stimulating results. Initially Adam plays a few bars of “chopsticks”, which Tom then picks up and continues by making up a trio section on the spot. This is similar to real-world COINs, where leaders easily take turns in the leadership role, leading to an unpredictable, but high-quality end product.

### **2. Whoever has a creative idea, takes the lead, and the other follows**

Initially Adam challenges Tom to play with him a more complex tune “Car-Bar-lick Acid”. Tom accepts but when Adam starts playing “chopsticks” as a joke, Tom takes up this joke, and keeps on playing “chopsticks”, improvising and adding new sections along the way, until Adam changes their melody to “Bill Bailey”, flexibly picked up by Tom. Adam finally leads over into “Tiger Rag”. This again corresponds to real-world COINs where the leaders are in perfect synch, with the one who knows the tune best taking the lead, and the rest of the team following along, until another team member has a better idea, which is then adapted by the rest of the team.

### **3. They are masters of their profession**

Adam and Tom were both child prodigies who started at a young age playing ragtime. Playing rag is rarely profession, but always passion. In these two videos the two artists are participating at a festival, but they still use the opportunity of having a break to play together even more. These two sessions are completely unplanned and unrehearsed, nevertheless they lead to a stunning performance, because the two masters speak the same (musical) language, and are able to communicate through their music. They both have huge amounts of talent and passion for their art, which allows them to coordinate effortlessly and to easily switch roles. This is the same for any other COIN, where the one who is best qualified for a task becomes the leader until somebody else comes along who is better qualified.

### **4. The one who knows less learns on the fly from the master**

In their jamming session, the lead goes from Adam, who challenges Tom with a few bars of “chopsticks” to their musical competition, to Tom, who knows the tune and takes the lead, training Adam on the fly. Adam quickly masters it so well that he now can take the lead to successfully introduce “Bill Bailey”, bringing Adam along, who then steps up leading the way, until Adam again jumps ahead by switching over to the “tiger rag”. This means that COINs are also learning networks, where more junior COIN members are constantly trained by the master.

### **5. They play and synchronize by ear**

In their communication and interplay, the “media is the message”. Adam and Tom speak the same musical language, even more, they breathe it and their brains are wired in the same way. Both have been infected by the “ragtime virus” when they were five year olds, and since then each has played for hours every day. They have the basic rhythms and melodies in their DNA, and can play the “maple leaf rag” in their sleep. Cooperation and playing together comes as natural as breathing to them, they do not need conscious effort to collaborate, rather this happens in their subconsciousness.

### **6. Competitive collaboration leads to a perfect product**

If each of the players had jammed and improvised alone, never would an end product of this quality have come out. This session lives from the musical tension and creativity of these two top musicians, who nurture each other’s creativity in playful competition, thriving in creativity and trying to beat each other in new ideas, leading to perfect collaboration. This is competitive collaboration at its best!

## 7. They do it for the fun of it!

Adam and Tom enjoy playing together so much that they utilize the break in their concert to play even more. Grooving and jamming for them is not work, but sheer pleasure that energizes them. COIN members join their group not for money, but because they are intrinsically motivated to work together towards their shared goal, and develop a superior product.

The remaining five principles resume general lessons for teamwork from Jazz, based on the personal experience of one of the authors.

## 8. Be prepared

None of the professional musicians we have ever met walked aimlessly to the stage. The set lists were always perfectly prepared and, based on this fixed frame, flowing transitions, announcements and improvised organizations were possible: Preparation is everything, in Jazz as well as in leadership and management. For large organizations, which have to consider enormous scaling and scope effects, this means, that the “set list” of their intended transformation has to be exactly designed in advance. The success of the “Real Book”, the Bible of Jazz notation, is based on the fact that it’s the perfect guideline and universally understandable. If Jazz musicians all over the world play or jam together, the “Real Book” is the “Lingua Franca of Jazz” and available in different keys (C / F / Bb / Eb) in order to avoid misunderstandings among the different sections in the group (rhythm section, horns, electronic devices, etc.):

The image displays two pages of handwritten musical notation for the jazz standard "So What" by Miles Davis. The notation is in 3/4 time and includes a bass line and chord progressions. The left page shows the first system with a key signature of one flat (Bb) and a tempo marking of "3/4 (MED-SLOW)". The right page shows the second system with a key signature of two flats (Bb, Eb) and a tempo marking of "3/4". Both pages include handwritten annotations such as "N.C.", "E-7(b9)", "D-7(b9)", "F-7(b9)", and "C-7(b9)". The title "SO WHAT" and the name "MILES DAVIS" are written at the top of each page.

Figure 2. Miles Davis, “So What”, Real Book, 6th edition in C (left) and Bb (right)

## 9. Learn to listen

For novices, Jazz mostly seems to be unstructured and a bit messy, in order to see through its sometimes complex structures. Already at the early stage of Jazz, the great German philosopher Theodor W. Adorno, who escaped Nazi Germany towards England and later to the U.S., refused to accept Jazz as art and claimed that it is at best “the everyday music of the upper class” (Adorno 1936). After WWII, Joachim-Ernst Berendt, at the time a young journalist who later should become the spiritus rector of international Jazz research criticized Adorno in 1953. While Berendt considered American Jazz as the most original musical achievement of the twentieth century and emphasizes the high demands of the complex structures of Jazz based on improvisation, Adorno sees Jazz as a form of modern hit and accuses it of conventionality and conformism. Berendt, at the time, put it that way: “Adorno says that Jazz is 'something in which there is nothing to understand but the rules of the game'. Well, at least that's what it means to know what you're talking about when you say Jazz.” (Berendt 1953).

Once these structures are defined, it is clear how subjects are taken up and freely exchanged by the musicians. This requires, as in professional practice, to listen carefully and to ask if in doubt, because: He who listens is leading, especially in business, as we learn from Otto Scharmer: “When you become a director, you will be confronted over and over with one thing: ‘Listen. Listen and learn to listen.’” (Scharmer 2016, Scharmer 2018).

## 10. Let it flow

According to Butterfield the microcosmos of Jazz opens its secrets by understanding the variation of the eight notes which enables a Jazz Band to “Swing”: “Varying the Beat-Upbeat Ratio (BUR)—i.e., moving between straight and swing eighth notes—enables jazz musicians to manipulate the flow of motional energy across a phrase in systematic ways in conjunction with other melodic processes.” (Butterfield 2011). In other words, the interaction and interplay of a Jazz group is always based on a common ground which has to be created first.

Only by creating this secure base, improvising in Jazz will be possible at all, and recent analyses reveal the crucial importance of evaluating improvisational options in light of a field of interactive possibilities (Hodson 2007, Butterfield 2011). Once the audience is won, the musicians are able to leave the security zone and venture into unknown musical spheres of an ordinary Jazz standard tune. Only those who are breaking the comfort zone are open to new experiences!

## 11. Reduce to the max

The most surprising fact in Jazz for one of the authors was that it is not important what is played, but what is NOT played. As in management, tempo, rhythm and improvisation are the key factors for any successful corporate development. Simplicity is one of the main secrets in creating groove in Jazz. Some of the best examples ever recorded are “One Note Samba (Samba De Uma Nota So)” by Antonio Carlos Jobim or “All Blues”, one of the outstanding tunes in Miles Davis’ epochal oeuvre “Kind of Blue” (both released in 1959). Bill Evans, a Jazz giant himself and at the time pianist in Miles’ group, describes Davis’s ideas in the liner notes as “exquisite in their simplicity”. Without any rehearsal, and within only two days, “Kind of Blue” was recorded: the bestselling Jazz Album ever.

Buster Williams, a renowned bass player who owned the biggest flight case one of the authors has ever seen in his life, described the magic of playing with Miles Davis as follows: “With Miles, it would get to the point where we followed the music rather than the music following us. We just followed the music wherever it wanted to go. We would start with a tune, but the way we played it, the music just naturally evolved.” (Williams, quoted by Barrett 2011).

The image displays two pages of handwritten musical notation. The left page is for "ONE NOTE SAMBA" by Antonio Carlos Jobim, featuring a single melodic line in treble clef with lyrics in Portuguese and English. The right page is for "ALL BLUES" by Miles Davis, showing a single melodic line in treble clef. Both pages include handwritten annotations and chord symbols.

Figure 3. Antonio Carlos Jobim, “One Note Samba”, Real Book, 2nd edition in C, Volume 1 (High voice). Miles Davis, “All Blues”, Real Book, 6th edition in C



## 12. Be modest

In all these years, the most successful musicians one of the authors has ever met, were the most modest of them all. He is remembering for example private Japanese lessons with the legendary Bass player Ray Brown or talking history with guitarist Jim Hall. Both were also excellent educators who could pass on their knowledge to the next generation: Sharing is the magic power of rotating leadership, both in jazz as in management. As we learn from Berendt, who later became a great music ethnographer, sharing and listening are highly connected with modesty and lead to personal epiphany:

“When Kakua, one of the early Zen wise men in Japan in the 9th century, returned from a journey through distant lands, the emperor asked him to come and tell him everything, what he had experienced on his journey. Kakua bowed deeply, remained silent for a long time, took the small bamboo flute, which he always carried with him, out of his pocket and played a single note, remained silent, bowed even deeper than before and left. The emperor was at a loss. But he kept this one note in his heart, and— it is reported—in old age he found enlightenment.” (Berendt 1998)

## Discussion

While COINs form when people from many different backgrounds, countries, and cultures get together to innovate towards a shared goal, Jazz musicians are special members of COINs, as they already share the same context to a large extent, and thus do not have to spend long hours to build a shared language and understanding. Also, COINs frequently collaborate over long distance using the Internet to form virtual teams, while Jazz bands normally share the same stage. Therefore, Jazz bands are “elite” COINs, sharing a privileged environment that “ordinary” COINs do not have. They thus are idealized role models and exemplars illustrating the key tenets that COINs using virtual collaboration techniques should look for to gain inspiration and deep insights.

As we can see, the future of virtual musical collaboration is already there. Tools such as Apple’s “GarageBand” are creating an online ecosystem that allows musicians all over the world to improvise together, no matter where they live. Thanks to these virtual jam sessions, cultural, organizational and professional boundaries are becoming increasingly obsolete. The limits for this cooperation are set on the one hand by the capacity of the respective Internet access, and on the other hand by the technical skills of the Jazz musicians. By using the “Jam Session” mode, they get connected by the bandleader who initializes a session, then up to three band members can join real-time. Right now, the bandleader can chose between taking exclusive control of playback and recording or allow the other members to share control.

Probably, the next step will be a rotating leadership mode, in order to fulfill one of the main COIN principles. The bet is on.

By combining the seven key principles of rotating leadership, shown by the two ragtime pianists Tom Brier and Adam Swanson, with the five key principles of organizational development shown by personal experience of international Jazz authorities, we get 12 success factors that can be effectively used for (re)designing the organization. This set of “twelve-tone music” is—on the contrary to its atonal roots and strict principles— completely free in its combination. Our goal is to take the next steps towards a theory of “Organizational Flow” in order to measure intrinsic organizational “groove” with sociometric badges (Gloor et al. 2013) and other devices that measure human emotions. Thus, we get the perfect quantitative conditions to start measuring the growth of a company. In other words: “organizational flow” is where the groove of an organization starts becoming effective!

## References

- Adorno, T.W. Über Jazz, *Zeitschrift für Sozialforschung*, Volume 5 (1936), pp 235–259 (article in German)
- Barrett, F. Yes to the Mess. Surprising Leadership Lessons from Jazz, Harvard Business Review Press, Boston 2012
- Berendt, J.-E., Adorno, T.W. Für und wider den Jazz, *Merkur*, Volume 7, Issue 67 (September 1953), pp 887–893 (Article in German)
- Berendt, J.-E. Ich höre, also bin ich, in Vogel, T. (Ed), *Über das Hören: Einem Phänomen auf der Spur*, Attempto, Tübingen 1998, pp. 69–70 (Article in German)
- Burow, O. How Organizations Become Creative Fields: The Jazz Band Model of Leadership and the Role of Improvisation, *Zeitschrift für Supervision*, Volume 2 (2004), pp 1–21 (Article in German)
- Butterfield, M.W. Why Do Jazz Musicians Swing Their Eighth Notes?, *Music Theory Spectrum*, Volume 33, Issue 1 (April 2011), pp 3–26
- De Pree, M. *Leadership Jazz*, Doubleday, New York 2008 (2nd ed.)
- Gloor, P. Oster, D. Fischbach, K. JazzFlow - Analyzing “Group Flow” Among Jazz Musicians Through “Honest Signals” *KI - Artificial Intelligence*, February 2013, Volume 27, Issue 1, pp 37–43
- Hodson, R. *Interaction, Improvisation, and Interplay in Jazz*, Routledge, New York/London 2007
- Johansen, R., *Leaders Make the Future. Ten New Leadership Skills for an Uncertain World*, Berrett-Koehler Publishers, Oakland 2012 (2nd ed.)
- Kamoche, K. Pina e Cunha M., Vieira da Cunha J. Towards a Theory of Organizational Improvisation: Looking Beyond the Jazz Metaphor, *Journal of Management Studies*, Volume 40, Issue 8 (December 2003), 0022–2380
- Kidane, Y. Gloor, P. Correlating Temporal Communication Patterns of the Eclipse Open Source Community with Performance and Creativity, *Computational & Mathematical Organization Theory*. Volume 13, Issue 1 (March 2007), ISSN:1381-298X, 17–27, 2007
- Lewin, K. *Resolving Social Conflicts, and Field Theory in Social Science*, American Psychological Association, Washington, DC 1997 (Reprint. Original Harper and Row, New York 1948)

- Nemoto, K. Gloor, P. Laubacher, R. Social Capital Increases Efficiency of Collaboration among Wikipedia Editors, ACM Hypertext 2011: 22nd ACM Conference on Hypertext and Hypermedia, Eindhoven, NL, June 6–9, 2011
- Scharmer, O. Theory U: Learning from the Future as It Emerges. The Social Technology of Presence, Berrett-Koehler Publishers, Oakland 2016
- Scharmer, O. The essentials of Theory U: Core Principles and Applications, Berrett-Koehler Publishers, Oakland 2018
- Schein, E., Schein P., Organizational Culture and Leadership, Wiley, Hoboken 2017 (5th ed.)
- Schein, E. Schein P., Humble Leadership: The Power of Relationships, Openness, and Trust, Berrett-Koehler Publishers, Oakland 2018 (on print)
- Senge P. The Fifth Discipline: The Art and Practice of the Learning Organization, Currency Doubleday, New York 2006 (6th ed.)
- Weick, K. E. The Aesthetic of Imperfection in Organizations, in Cunha, M. P. and Marques, C. A. (Eds), Readings in Organization Science, Lisbon 1999: ISPA, pp 541–563