

Art of

The

Mike Amundsen  
API Academy / CA

@mamund

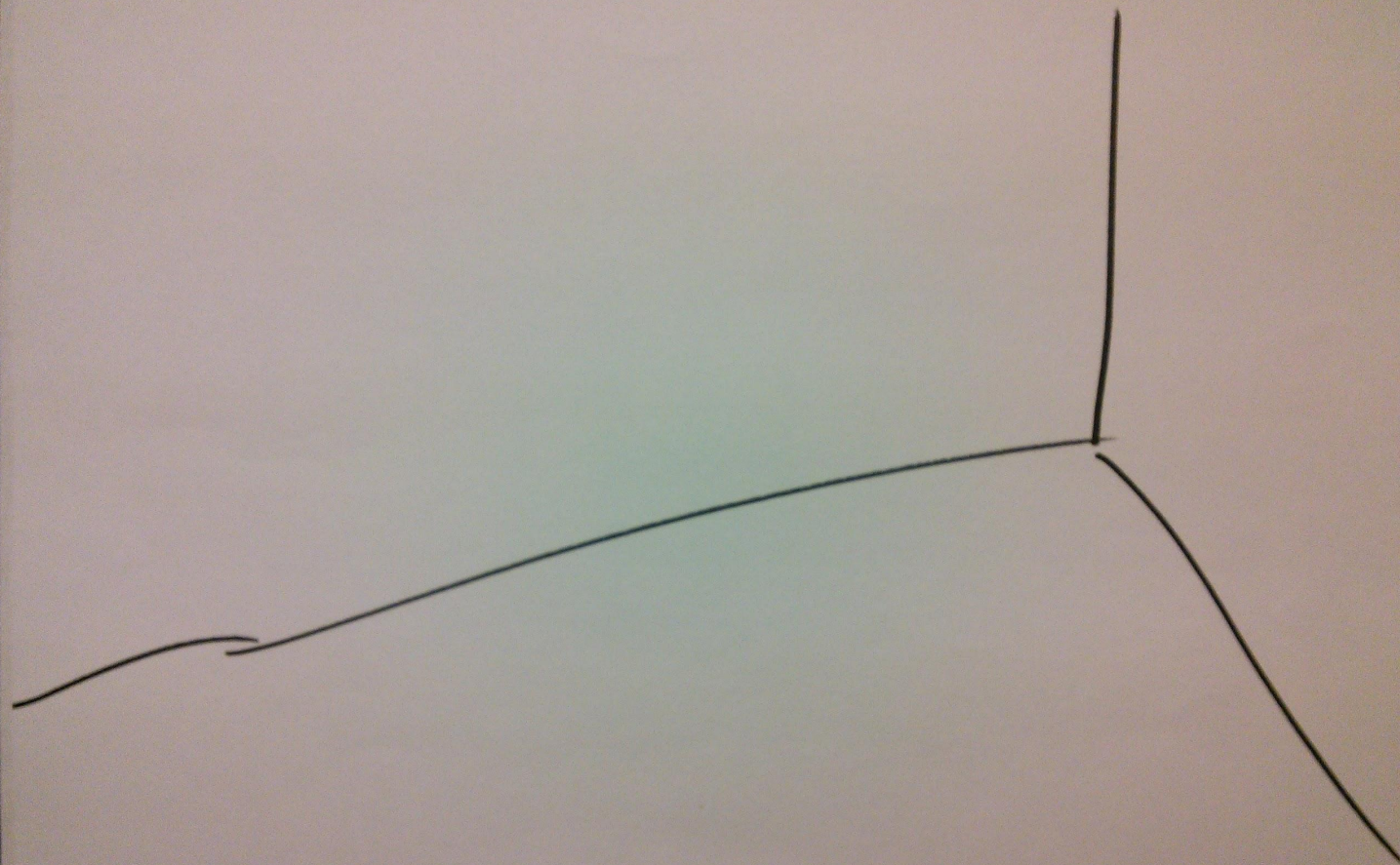
Hyper



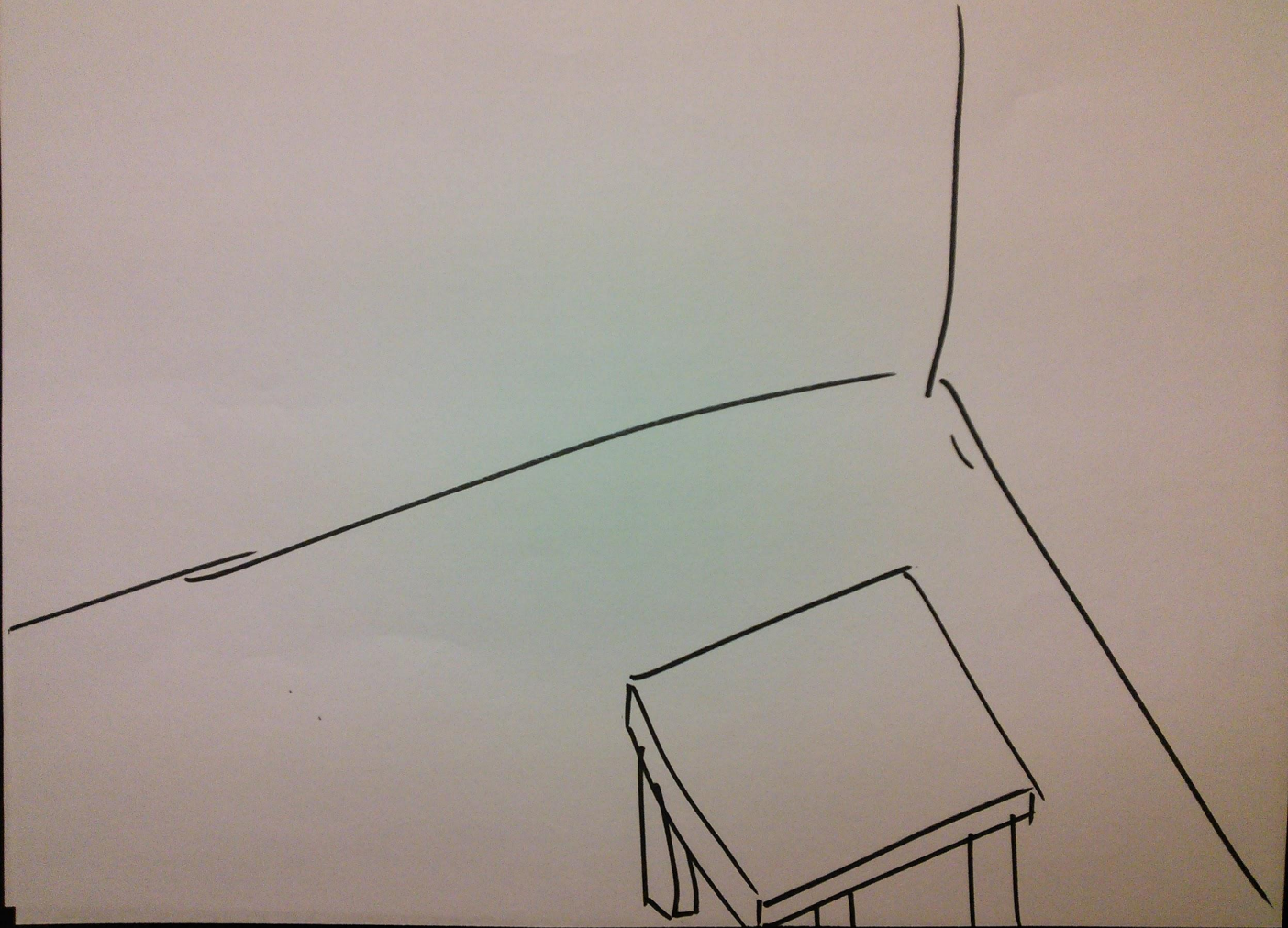
media

# The Room





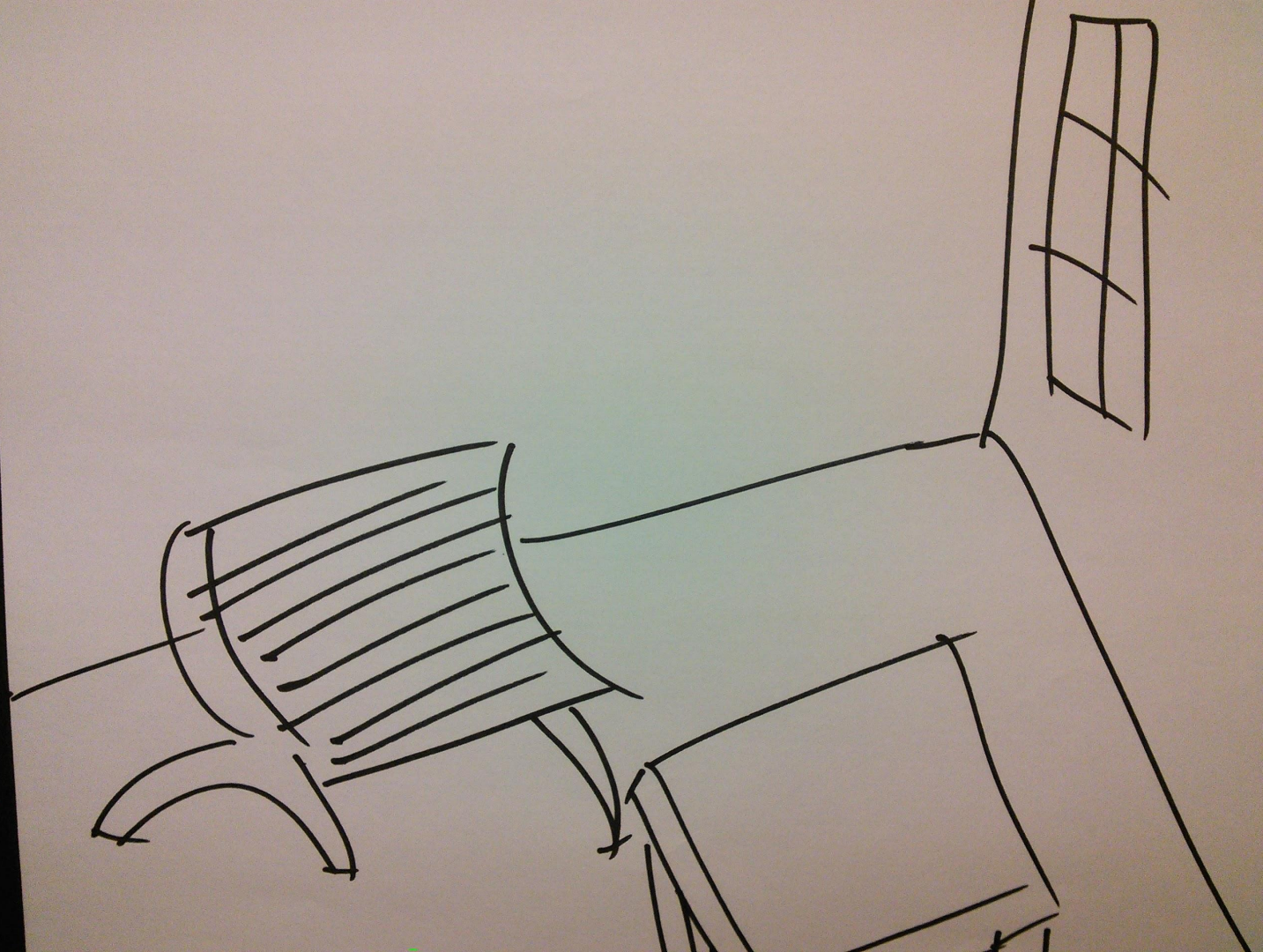




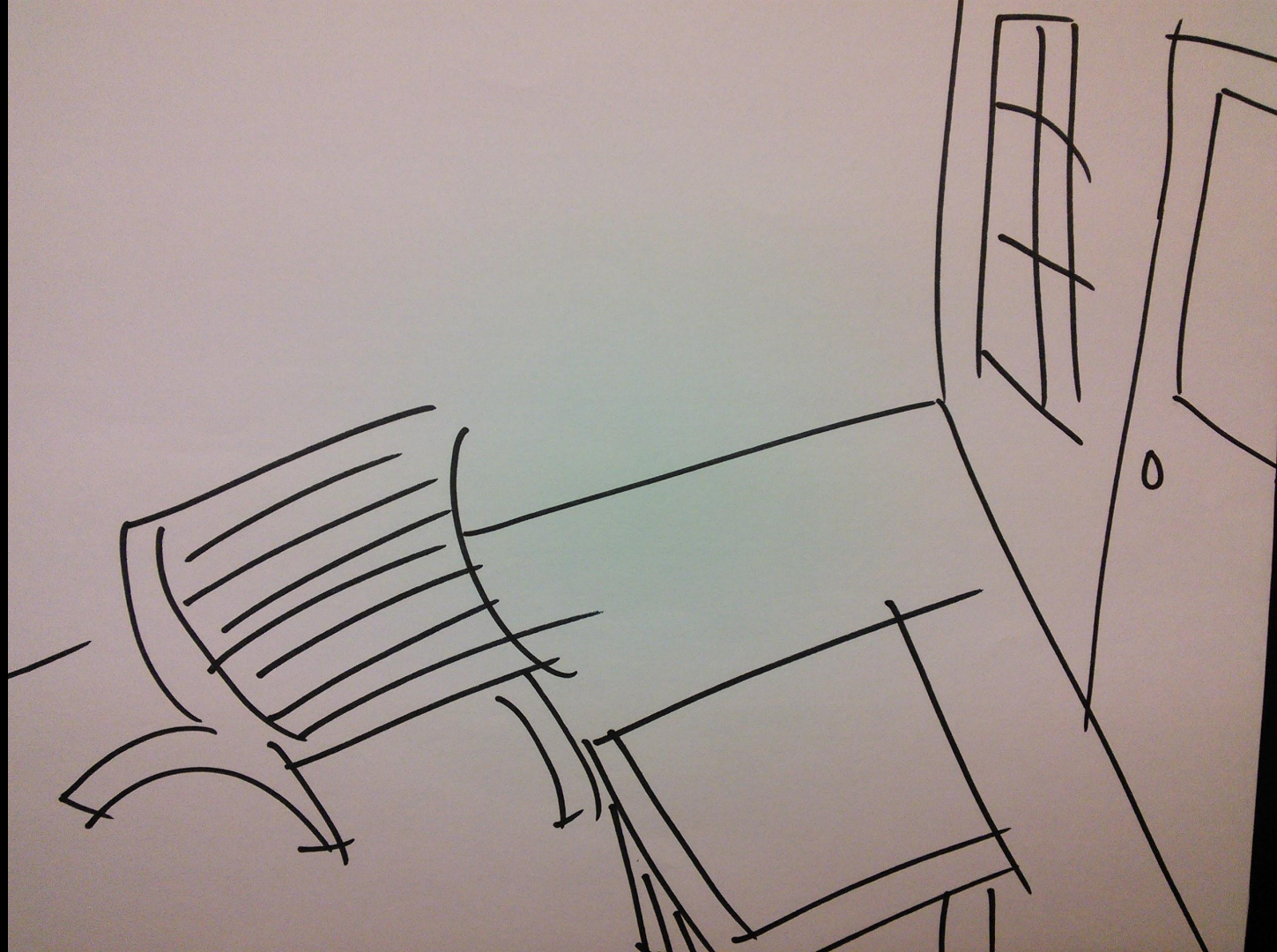




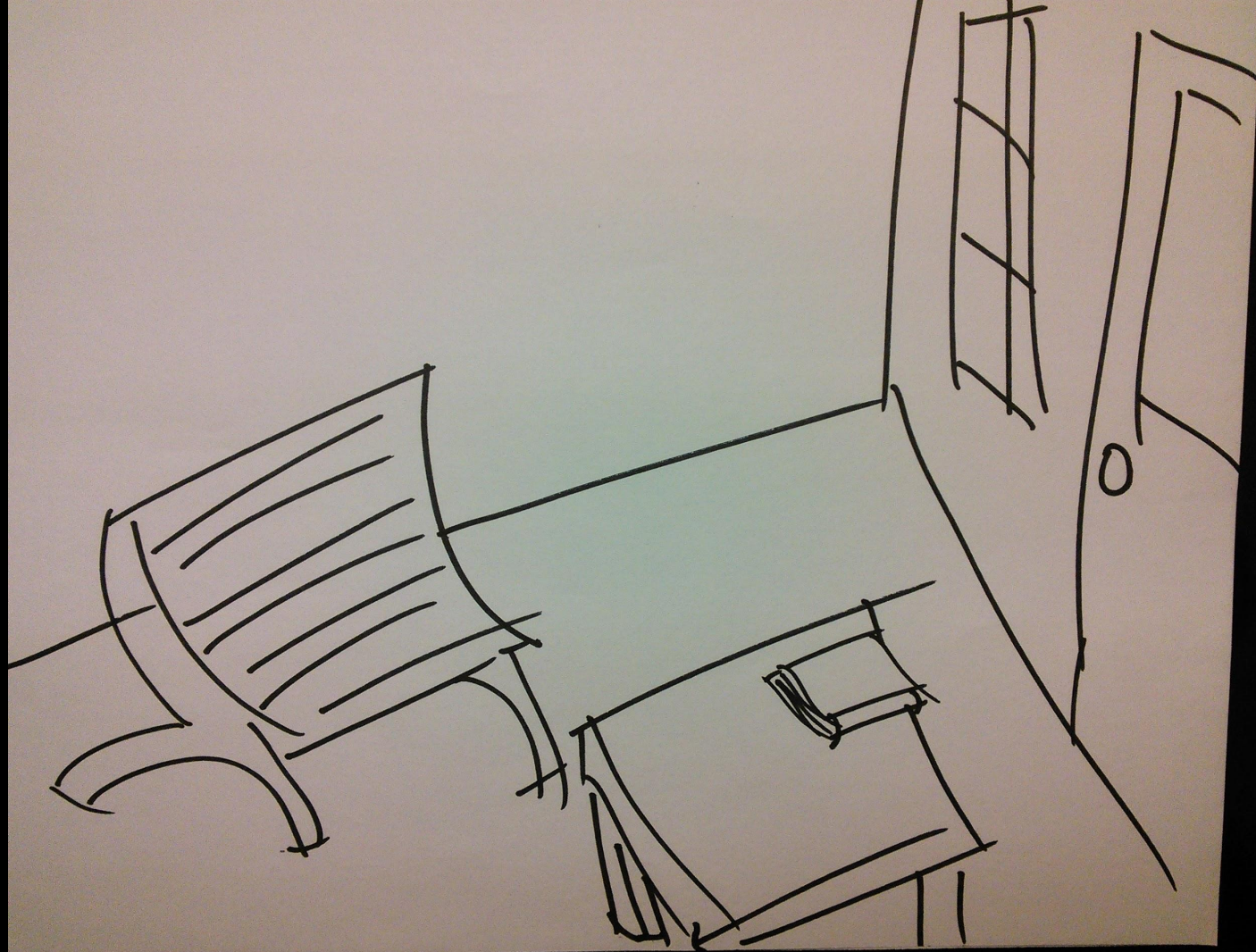




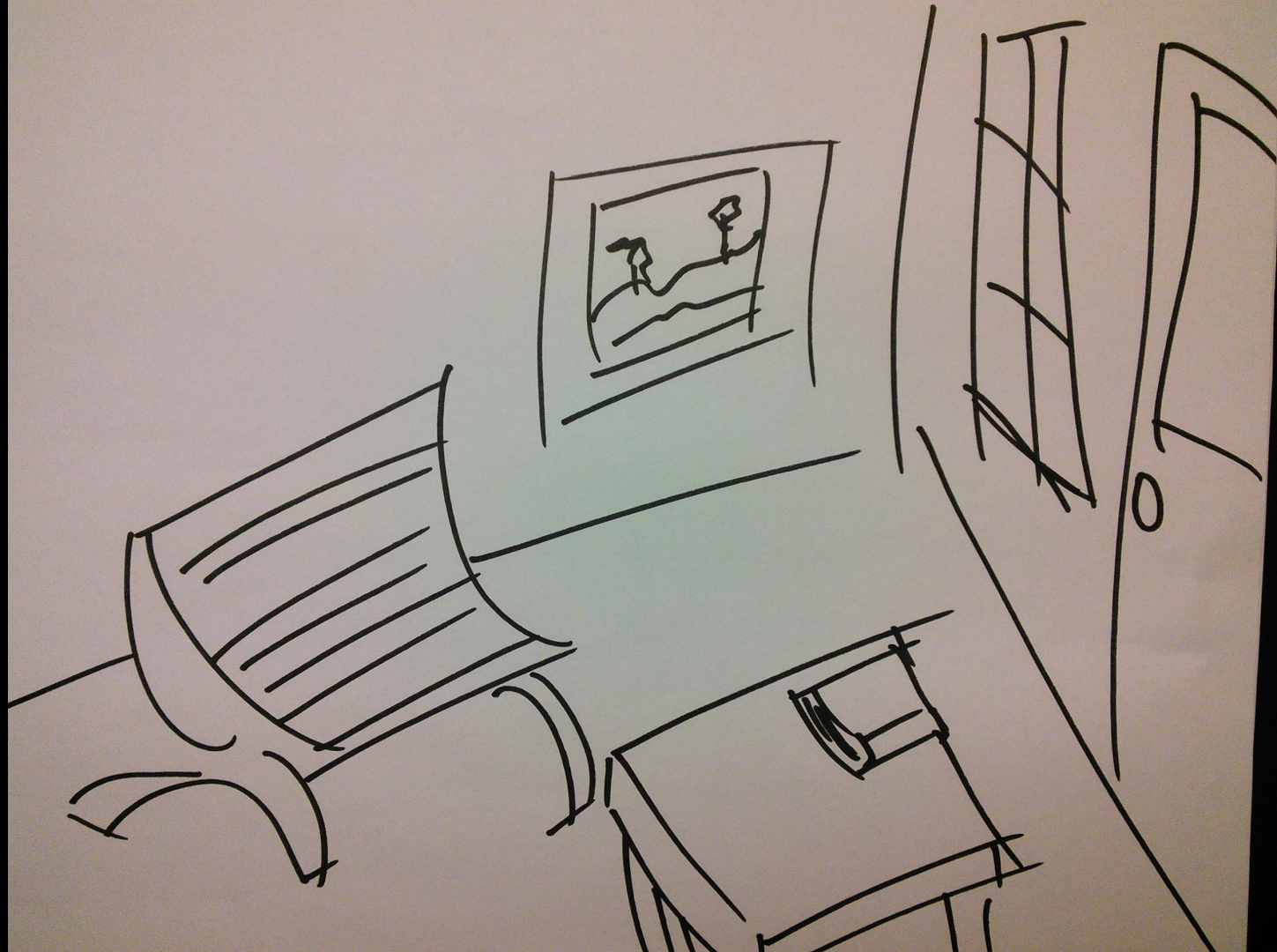




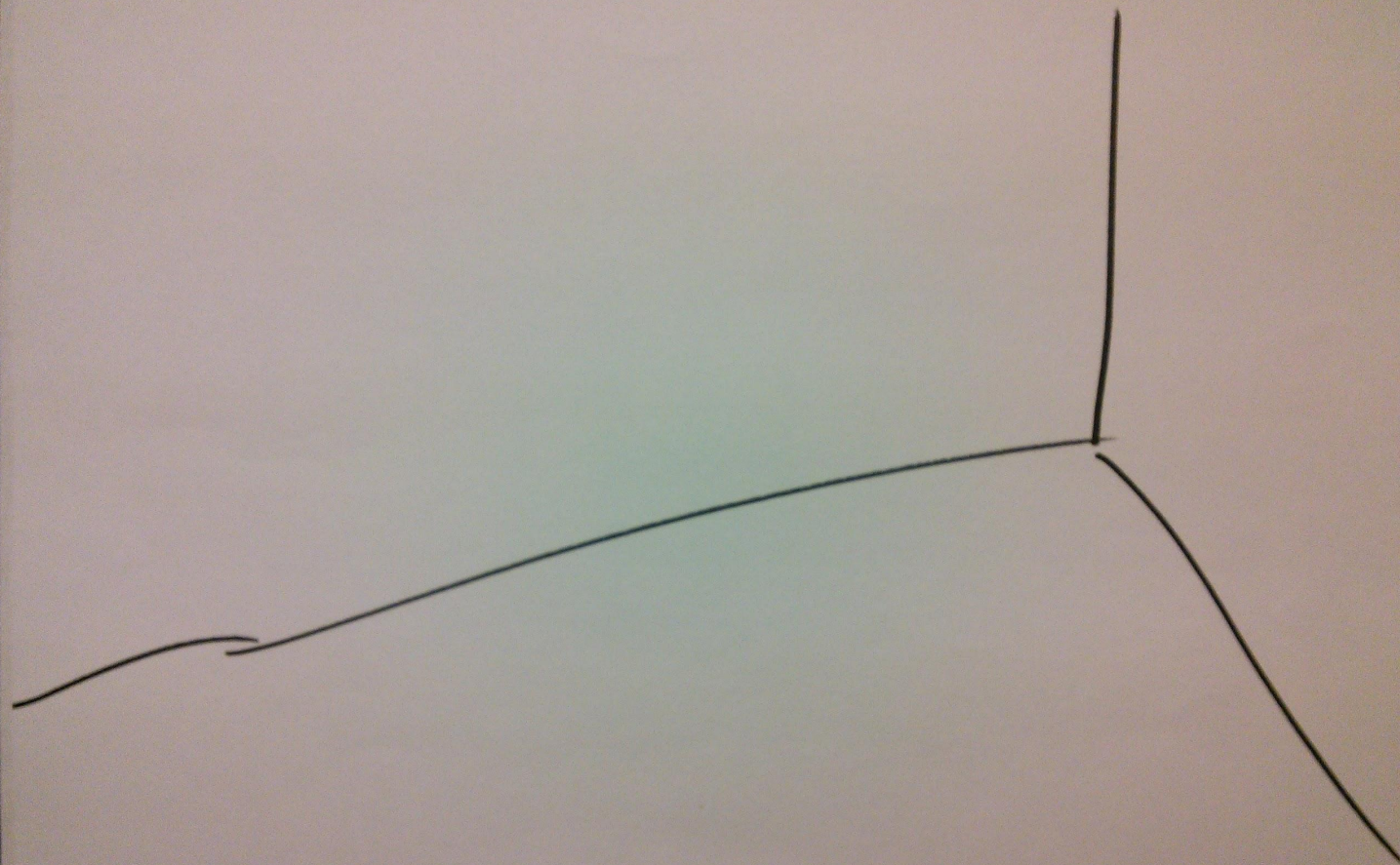




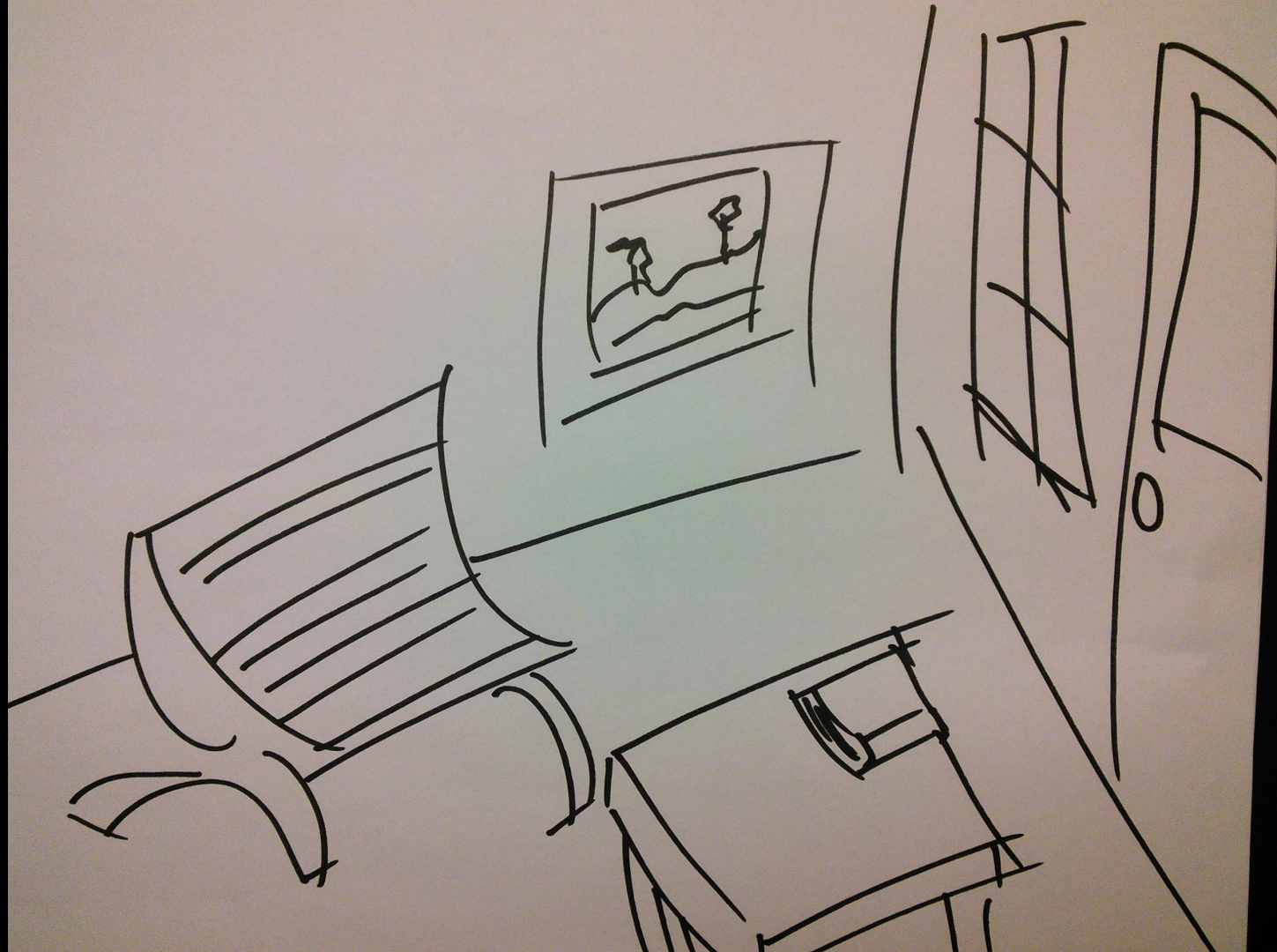












**This room has no  
*meaning* - it has lots of  
possibilities**



*[Gibson] defined affordances as all "action possibilities" latent in the environment, objectively measurable and independent of the individual's ability to recognize them, but always in relation to agents and therefore dependent on their capabilities.*  
**-- Wikipedia**



# The Dance



JUL 16  
2014

## Hypermedia as the engine of application state, the client-server dance

We are currently seeing a significant amount of discussion about building hypermedia APIs. However, the server side only plays part of the role in a hypermedia driven system. To take full advantage of the benefits of hypermedia, the client must allow the server to take the lead and drive the state of the client. As I like to say, it takes two to Tango.

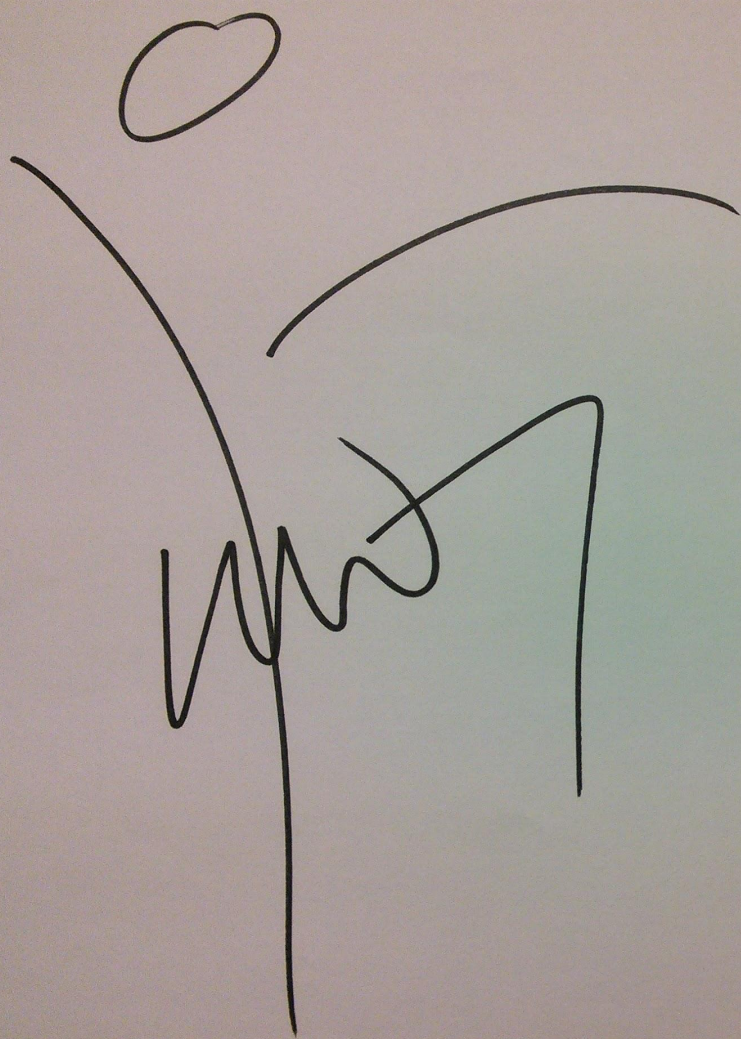
So you think you can dance?

Soon after I was married, my wife convinced me to take dance lessons with her. Over the couple of years we spent taking lessons, I learned there were three types of people who join a dance studio. There are people who want to get better at dancing, there are couples who are

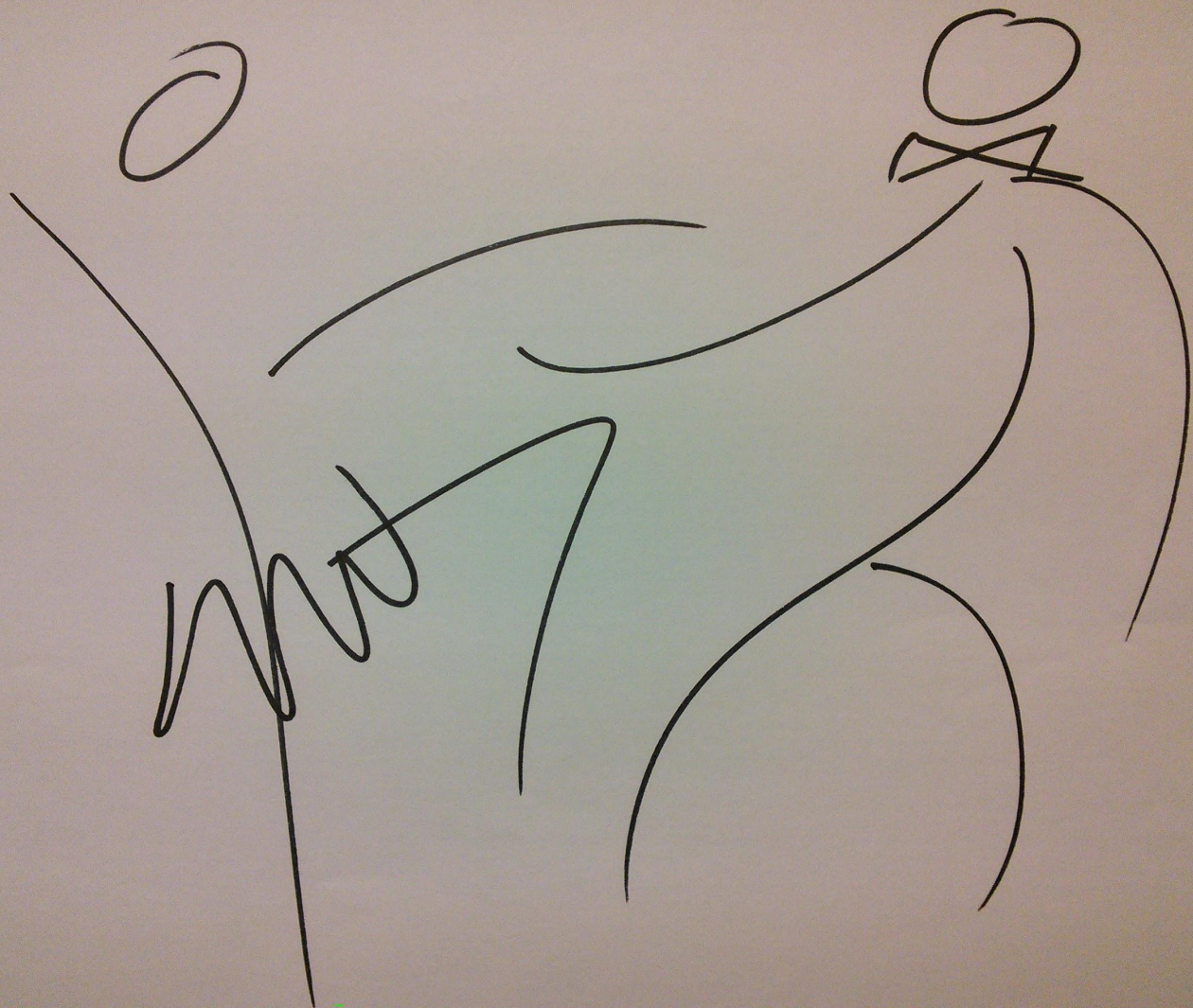




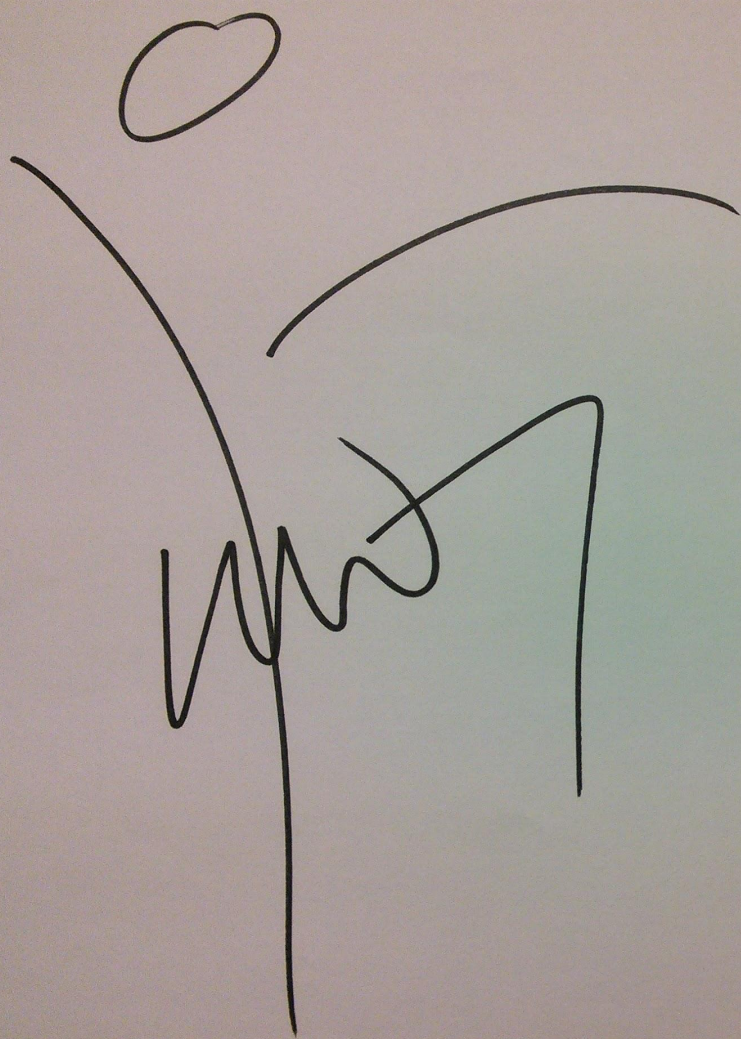












**Hypermedia can elevate  
the partnership to a  
*collaboration***



*"The client simply follows the lead of the server and trusts the server to provide it the necessary guidance."*

*-- Darrel Miller*

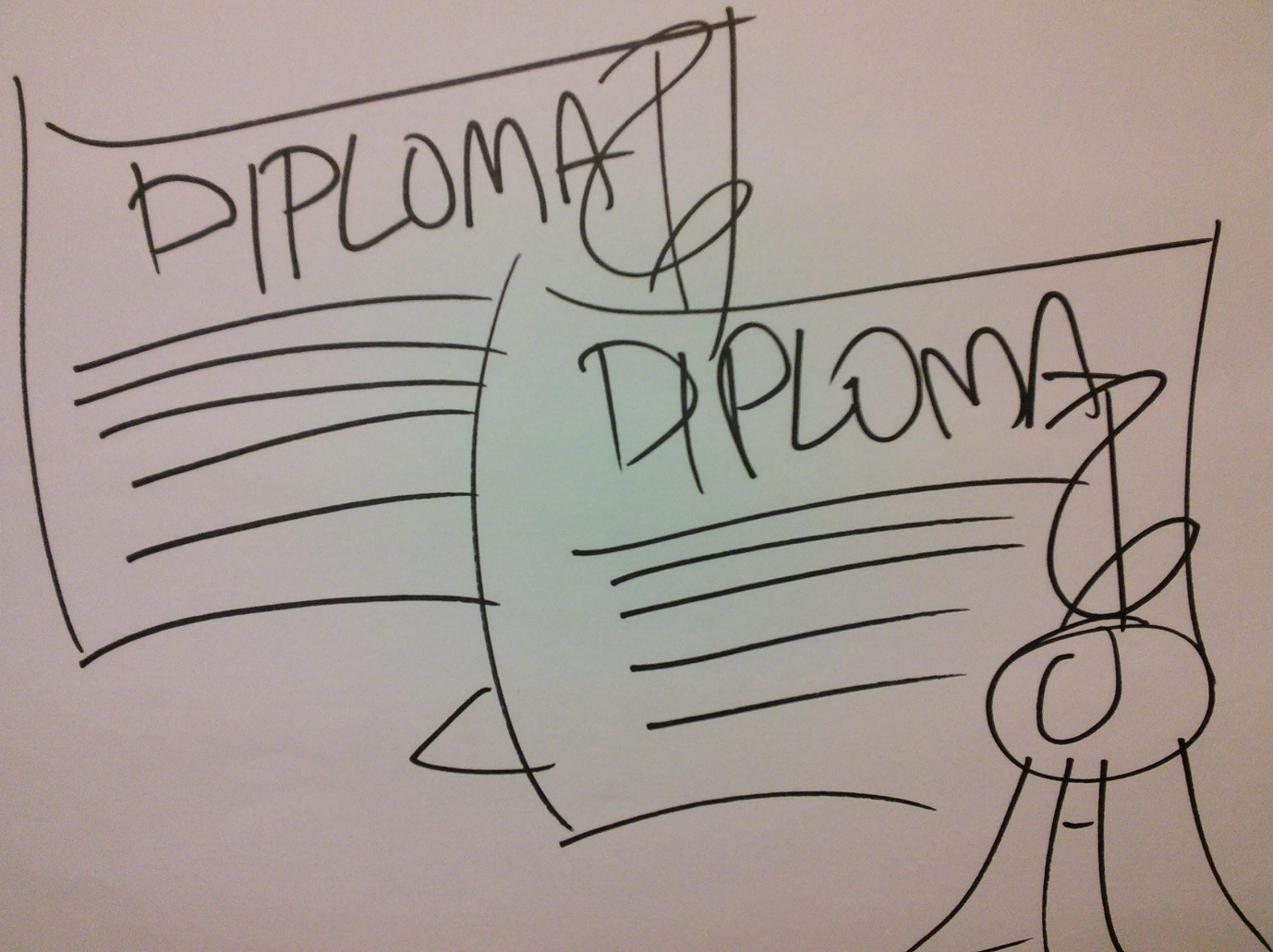














**The Music**





FLUTE + Pic.

- ALONZO'S BOOGIE -

AMUNDSEN

4th & only! D.S. A Two times

f

p - cue  
play on 2nd solo when cue

f

3rd time solo  
Lisa D7+A

repeat

rest

ff

D.S.

ff







TRPTS

- ALONZO'S BOOGIE -

AMUNDSEN

**[A]** TARGET 3RD & 2ND V.

**[B]**

*f*

*p cresc.*

*f*

*NO 10 PIANO*

Handwritten musical score for Trumpets, measures 1-4. Measure 1: Treble clef, key signature of one sharp (F#), 4/4 time. Notes: whole rest, quarter note F#4, quarter note G4, quarter note A4. Measure 2: whole rest, quarter note F#4, quarter note G4, quarter note A4. Measure 3: quarter note F#4, quarter note G4, quarter note A4, quarter note B4. Measure 4: quarter note F#4, quarter note G4, quarter note A4, quarter note B4. Dynamics: f, p cresc., f. Markings: [A] TARGET 3RD & 2ND V., [B], NO 10 PIANO.

**[C]**

*ff*

*F# 7 9*

Handwritten musical score for Trumpets, measures 5-6. Measure 5: Treble clef, key signature of one sharp (F#), 4/4 time. Notes: quarter note F#4, quarter note G4, quarter note A4, quarter note B4. Measure 6: quarter note F#4, quarter note G4, quarter note A4, quarter note B4. Dynamics: ff. Marking: [C], F# 7 9.





ARMUNDSON

Handwritten musical notation on a five-line staff. The notes are:  $\text{C}_4$ ,  $\text{D}_4$ ,  $\text{E}_4$ ,  $\text{F}_4$ ,  $\text{G}_4$ ,  $\text{A}_4$ ,  $\text{B}_4$ ,  $\text{C}_5$ . The notes are written in a simple, hand-drawn style.

Handwritten musical notation for the first staff of 'The Rose Tree'. The key signature is one flat (B-flat), and the time signature is 4/4. The melody begins with a quarter note G4, followed by a quarter note F4, then a half note E4. The next measure contains a quarter note D4, a quarter note C4, and a half note B3. The melody continues with a quarter note A3, a quarter note G3, and a half note F3. The final measure of the staff shows a quarter note E3, a quarter note D3, and a half note C3, ending with a double bar line.





AMUNDSEN

21 on 21

2.

9 11/22/20

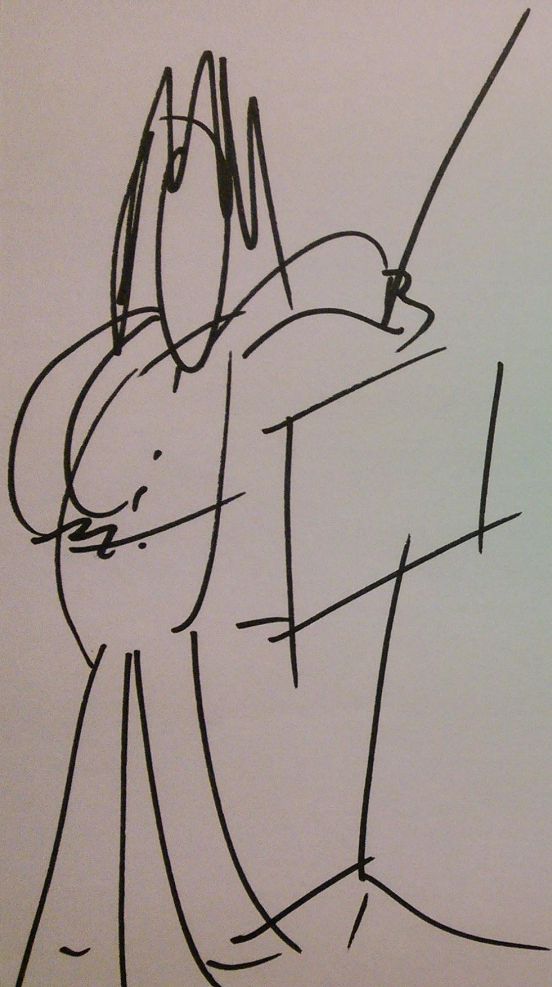
$Dm7 - \text{5(Add G)} / D\flat$      $D\flat A7 + \text{5(Add F\sharp)}$      $F7$

① *repa*

Handwritten musical score for "The Rose Tree". The score is written on two staves. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has one flat (B-flat) and the time signature is 3/4. The music is written in a simple, handwritten style. The first staff contains a melody with a repeat sign at the beginning. The second staff contains a bass line with a wavy line indicating a sustained note or a tremolo effect. The score is marked with dynamics such as *ff* (fortissimo) and *f* (forte). There are also handwritten notes like "C1" and "D1" in the margins. The piece ends with a double bar line and a final chord.

COPA

Handwritten musical notation on a five-line staff. The notation includes a treble clef, a key signature of one flat (B-flat), and a 4/4 time signature. The melody consists of several notes, including a half note G4, a quarter note F#4, and a quarter note E4. There are also some handwritten annotations: "CODA" above the first measure and "D2-5" above the final measure.





BASS BONE

-ALONZO'S BOOGIES-

AMUNDSEN

(A) TRUMPET SOLO

4x5

(B) A 4/3

(C) P. CASE. . . . . ff

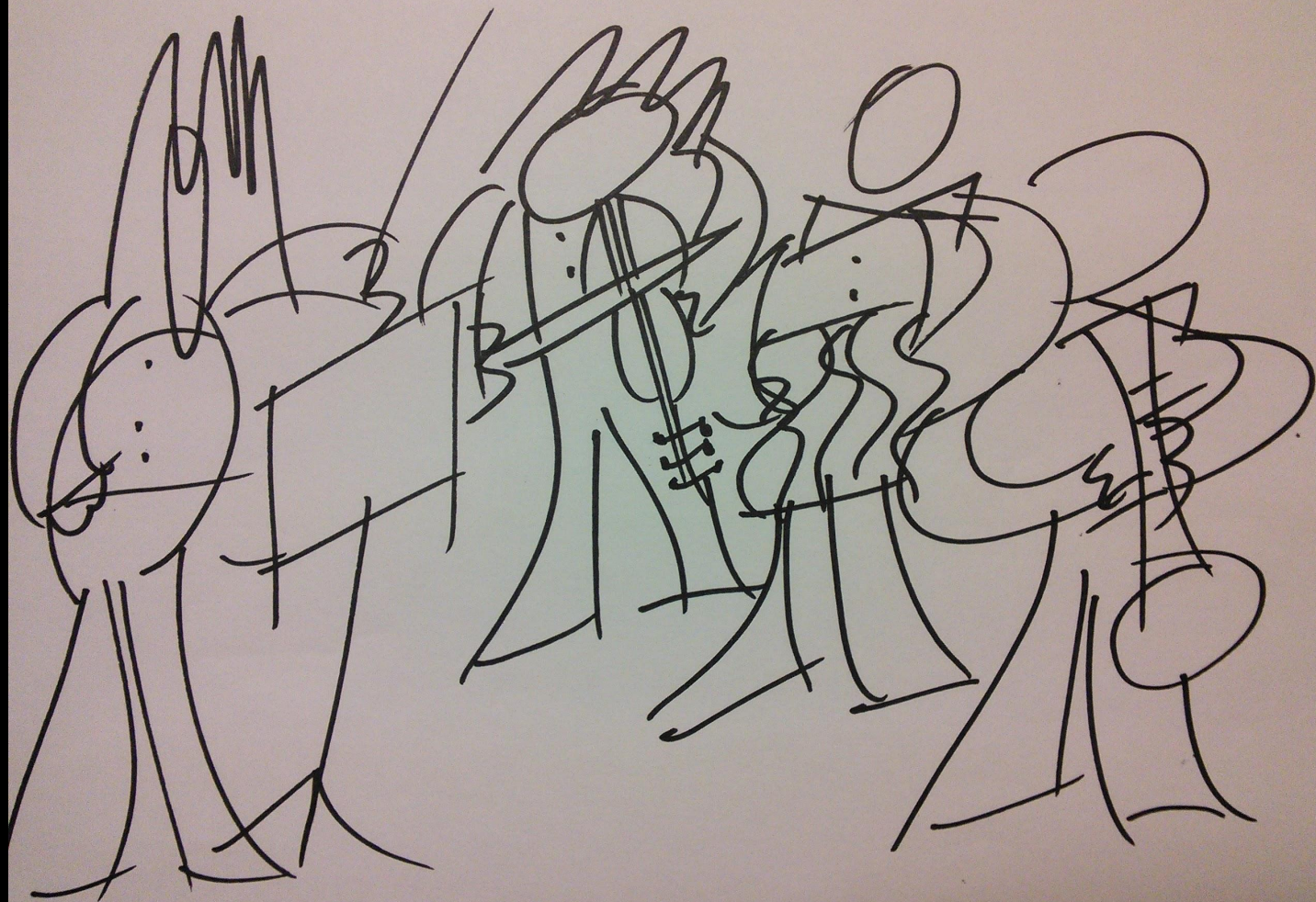
(D) SAX-BONE-Flute

ff D.C. al Coda

A KAM BONE SOLO FOR YOU, 21 BARS

CODA 2

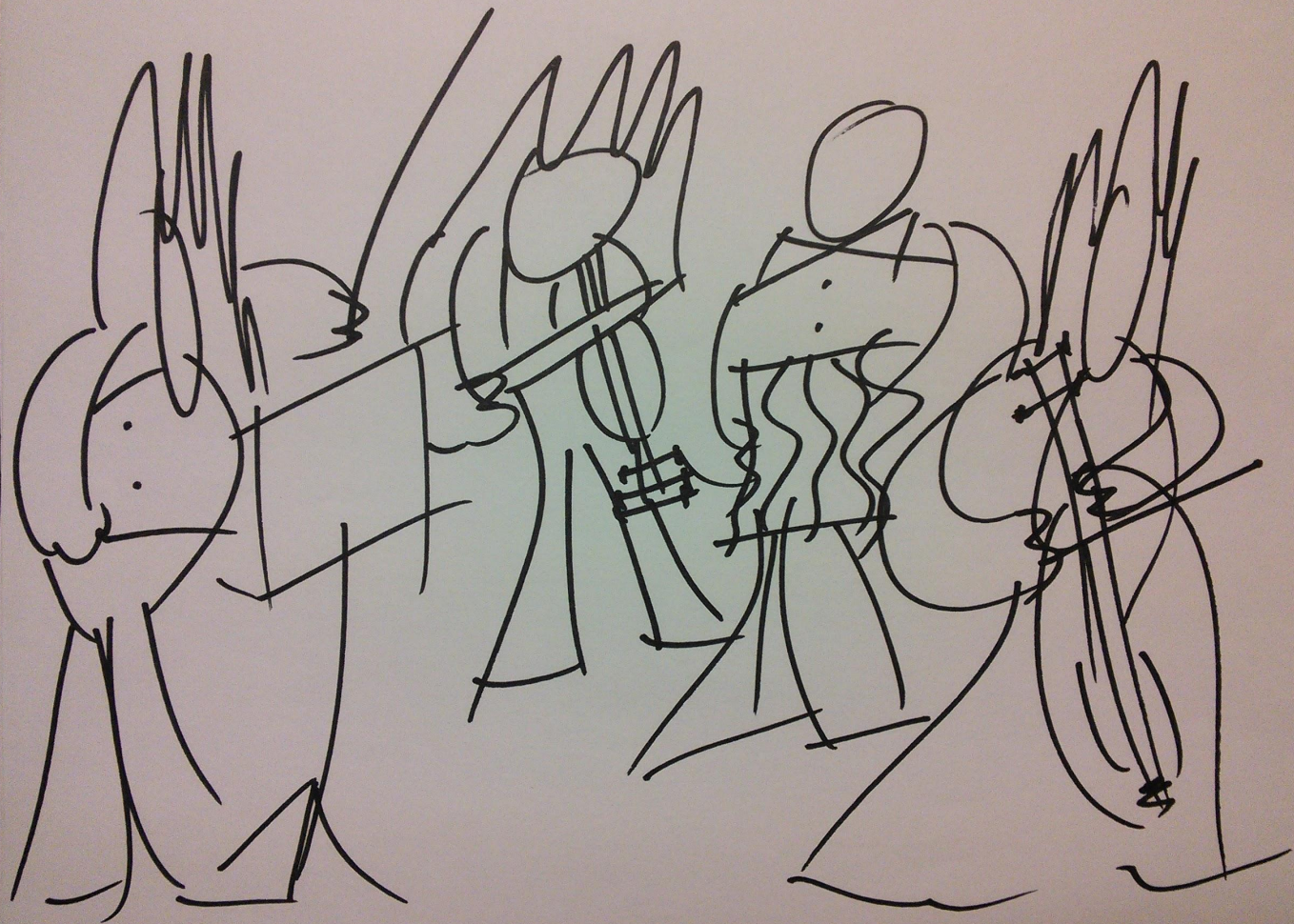
ff





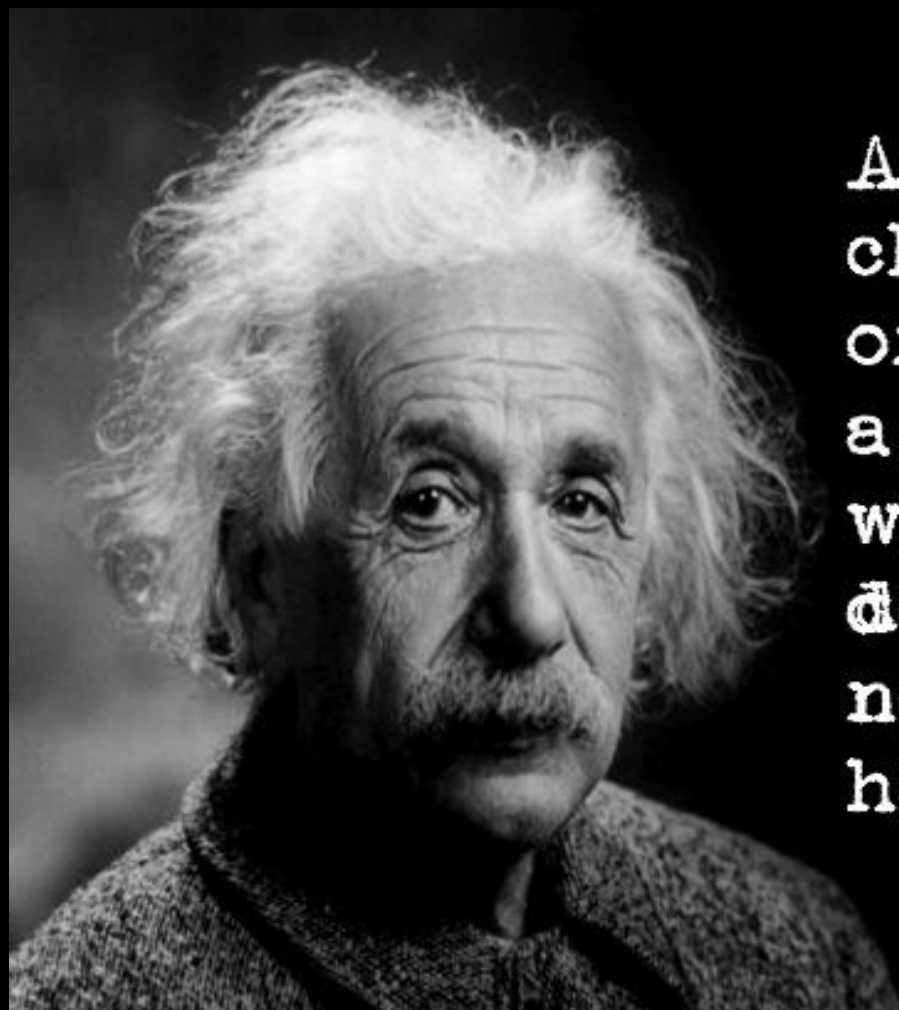








**Jazz compositions  
provide a *shared  
understanding* for  
cooperative self-  
expression**



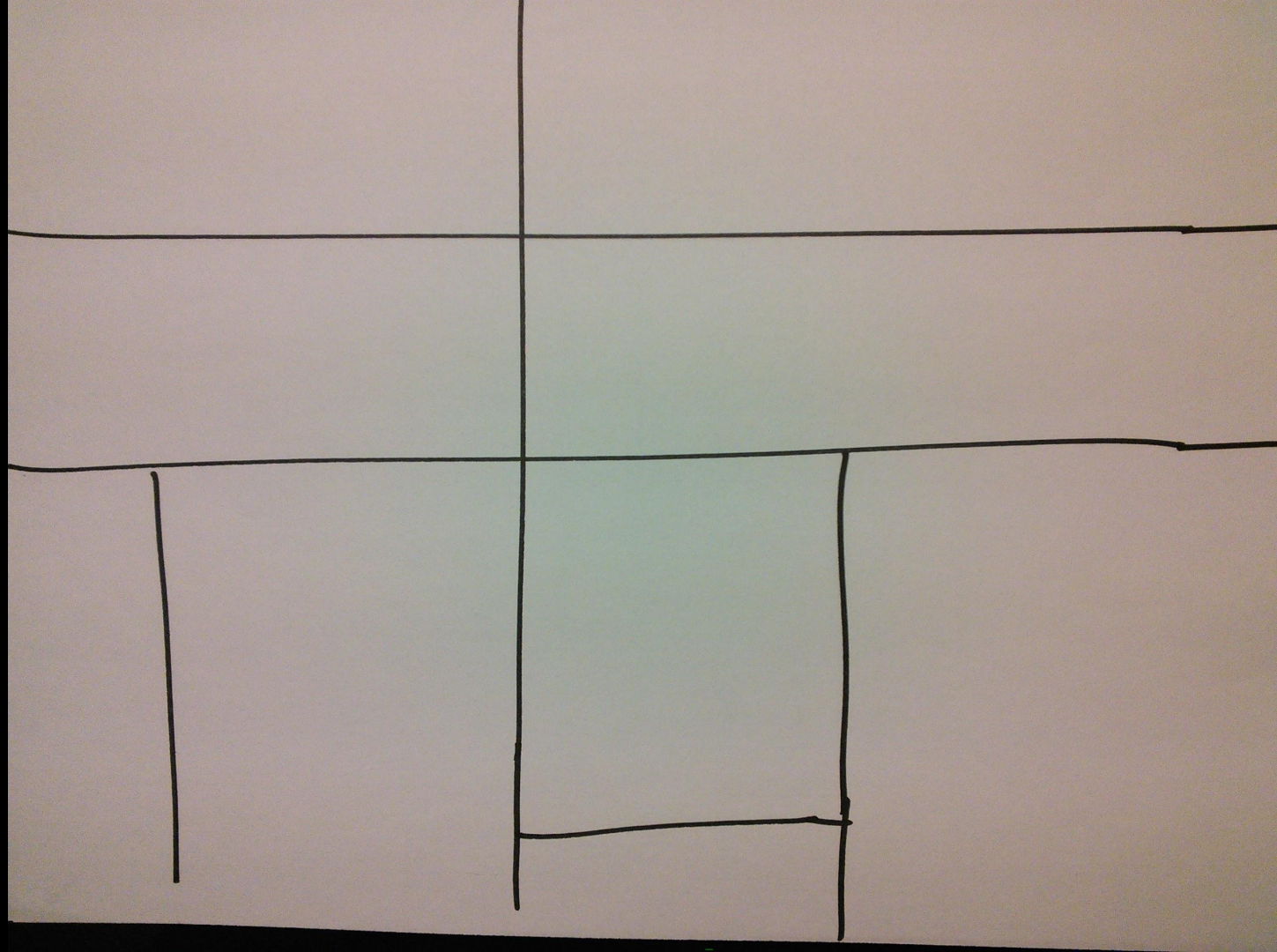
A table, a  
chair, a bowl  
of fruit and  
a violin;  
what else  
does a man  
need to be  
happy?

- Albert Einstein

[www.quotesworthrepeating.com](http://www.quotesworthrepeating.com)



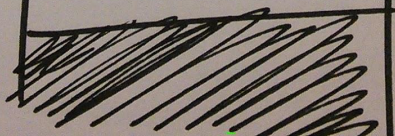
The Art





```
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  <data rel="self" url="http://example.org/" />
  <data rel="profile" url="http://example.org/profiles/people-and-place
▼<data id="people" rel="collection http://example.org/rels/people" url="http://example.org/rels/people"
  <data name="create" rel="http://example.org/rels/create" url="http://example.org/rels/create"
    {givenName}&f={familyName}&e={email}&a={avatarUrl}" action="append" />
  <data name="search" rel="search collection" url="http://example.org/rels/search"
    {givenName}&f={familyName}&e={email}" />
▼<data name="person" rel="item http://example.org/rels/person" url="http://example.org/rels/person"
  <data name="givenName">Mildred</data>
  <data name="familyName">Amundsen</data>
  <data name="email">mildred@example.org</data>
  <data name="avatarUrl" url="http://example.org/avatars/1" transclude="true"
    accepting="image/*">User Photo</data>
</data>
▼<data name="person" rel="item http://example.org/rels/person" url="http://example.org/rels/person"
  <data name="givenName">Mildred</data>
  <data name="familyName">Amundsen</data>
  <data name="email">mildred@example.org</data>
```

cj





```
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  {  
    "version" : "1.0",  
    "href" : "http://example.org/friends/",  
  
    "links" : [  
      { "rel" : "feed", "href" : "http://example.org/friends/rss" }  
    ],  
  
    "items" : [  
      {  
        "href" : "http://example.org/friends/jdoe",  
        "data" : [  
          { "name" : "full-name", "value" : "J. Doe", "prompt" : "Full Name" },  
          { "name" : "email", "value" : "jdoe@example.org", "prompt" : "Email" }  
        ],  
        "links" : [  
          { "rel" : "blog", "href" : "http://examples.org/blogs/jdoe", "prompt" : "Blog" },  
          { "rel" : "avatar", "href" : "http://examples.org/images/jdoe", "prompt" : "Avatar" }  
        ]  
      },  
  
      {  
        "href" : "http://example.org/friends/msmith",  
        "data" : [  
          { "name" : "full-name", "value" : "M. Smith", "prompt" : "Full Name" },  
          { "name" : "email", "value" : "msmith@example.org", "prompt" : "Email" }  
        ],  
        "links" : [  
          { "rel" : "blog", "href" : "http://examples.org/blogs/msmith", "prompt" : "Blog" },  
          { "rel" : "avatar", "href" : "http://examples.org/images/msmith", "prompt" : "Avatar" }  
        ]  
      }  
    ]  
  }  
}
```

UBER

Cj





```
▼<alps version="1.0">
  <doc format="text">A list of contacts</doc>
  <!-- a hypermedia control for returning contacts -->
  ▼<descriptor id="collection" type="safe" rt="contact">
    <doc>simple link/form for getting a list of contacts</doc>
    ▼<descriptor id="nameSearch" type="semantic">
      <doc>input for search form</doc>
    </descriptor>
  </descriptor>
  <!-- a contact: one or more of these may be returned -->
  ▼<descriptor id="contact" type="semantic">
    ▼<descriptor id="item" type="safe">
      <doc>link to individual contact</doc>
    </descriptor>
    <descriptor id="fullName" type="semantic"/>
    <descriptor id="email" type="semantic"/>
    <descriptor id="phone" type="semantic"/>
  </descriptor>
</alps>
```



A hand-drawn diagram on a light-colored background. It features a grid of lines. The top-left quadrant is filled with dense diagonal hatching. The bottom-left quadrant is also filled with dense diagonal hatching. The bottom-right quadrant contains a smaller, irregularly shaped region filled with dense diagonal hatching. The text 'UBER' is written in a bold, black, sans-serif font in the top-right quadrant. The text 'Cj' is written in a bold, black, sans-serif font in the middle-left area, spanning across the top and bottom quadrants. The text 'ALPS' is written in a bold, black, sans-serif font in the bottom-right quadrant.

**UBER**

**Cj**

**ALPS**



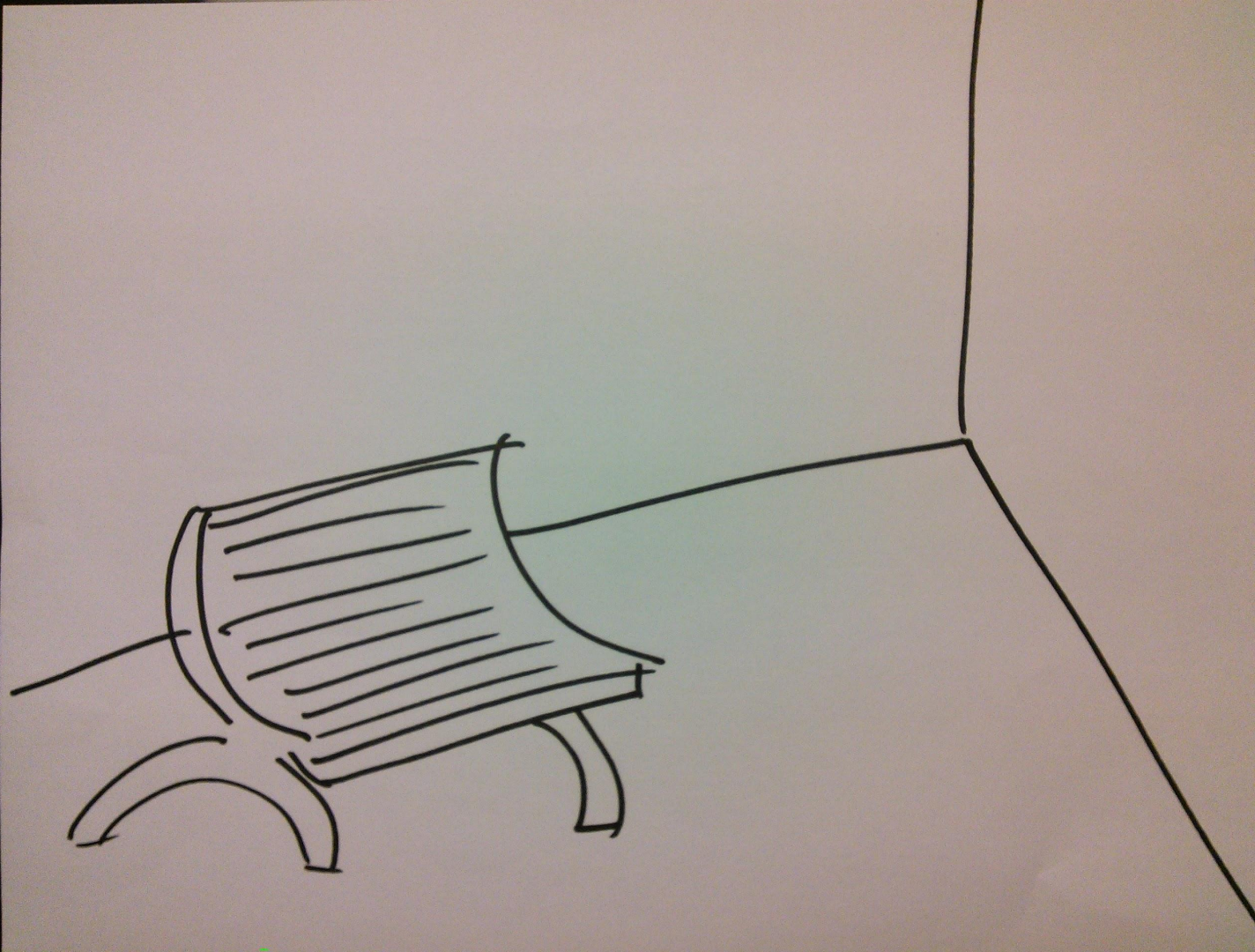
**One of the goals in my  
hypermedia designs is to  
*foster* cooperative self-  
expression**

*"When I say hypertext, I mean the simultaneous presentation of information and controls such that the information becomes the affordance through which the user (or automaton) obtains choices and selects actions." -- Roy Fielding*

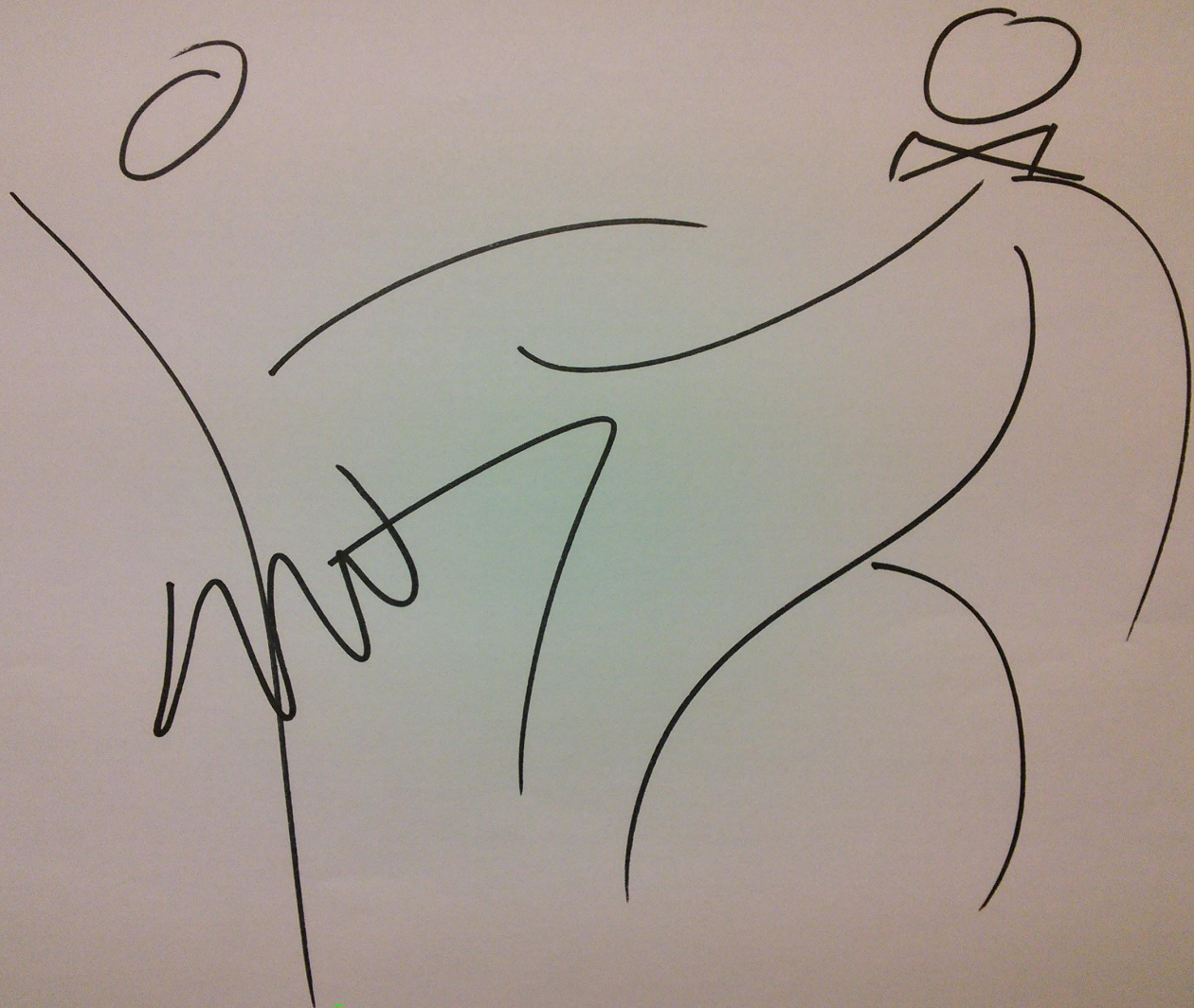




So . . .



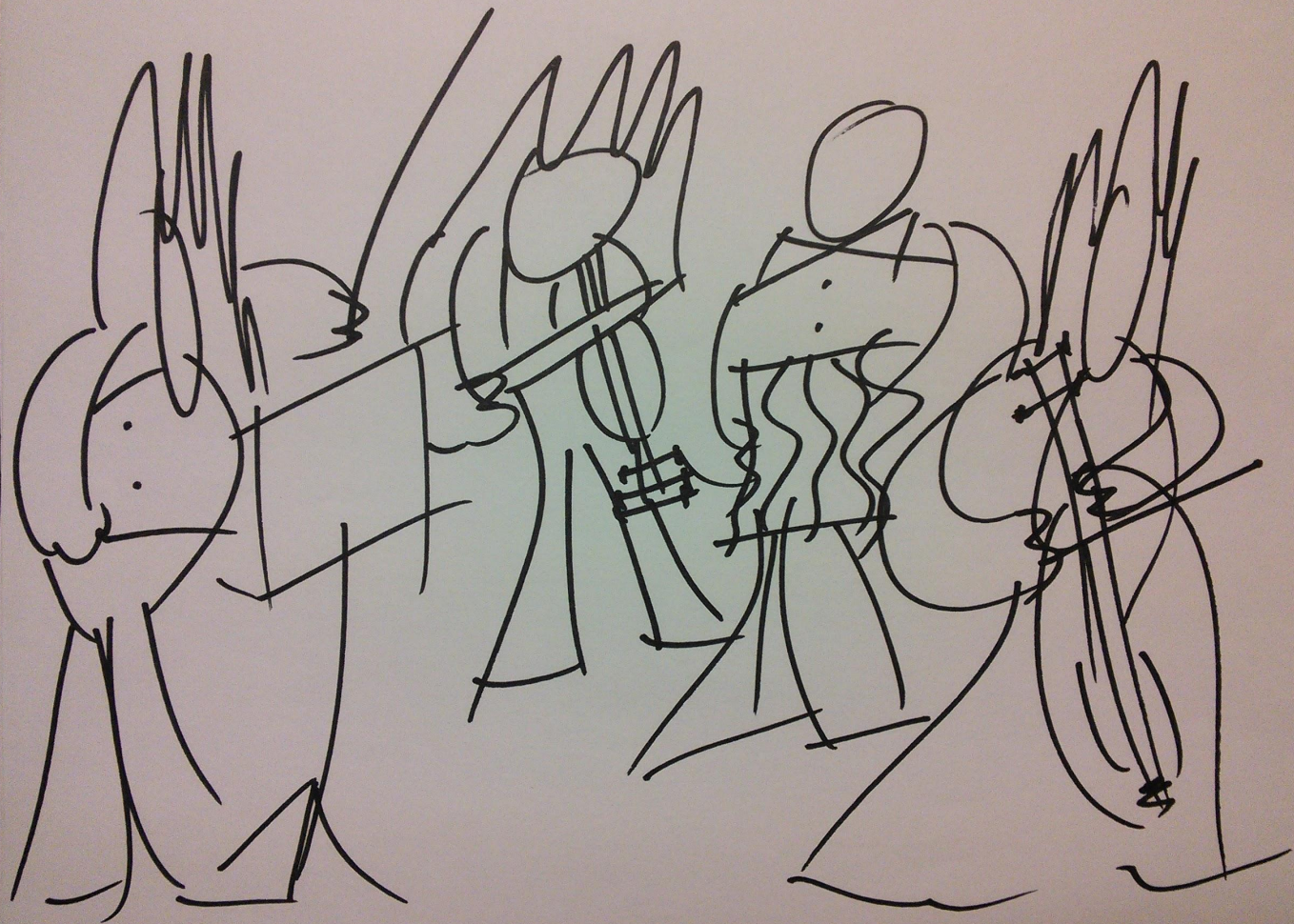






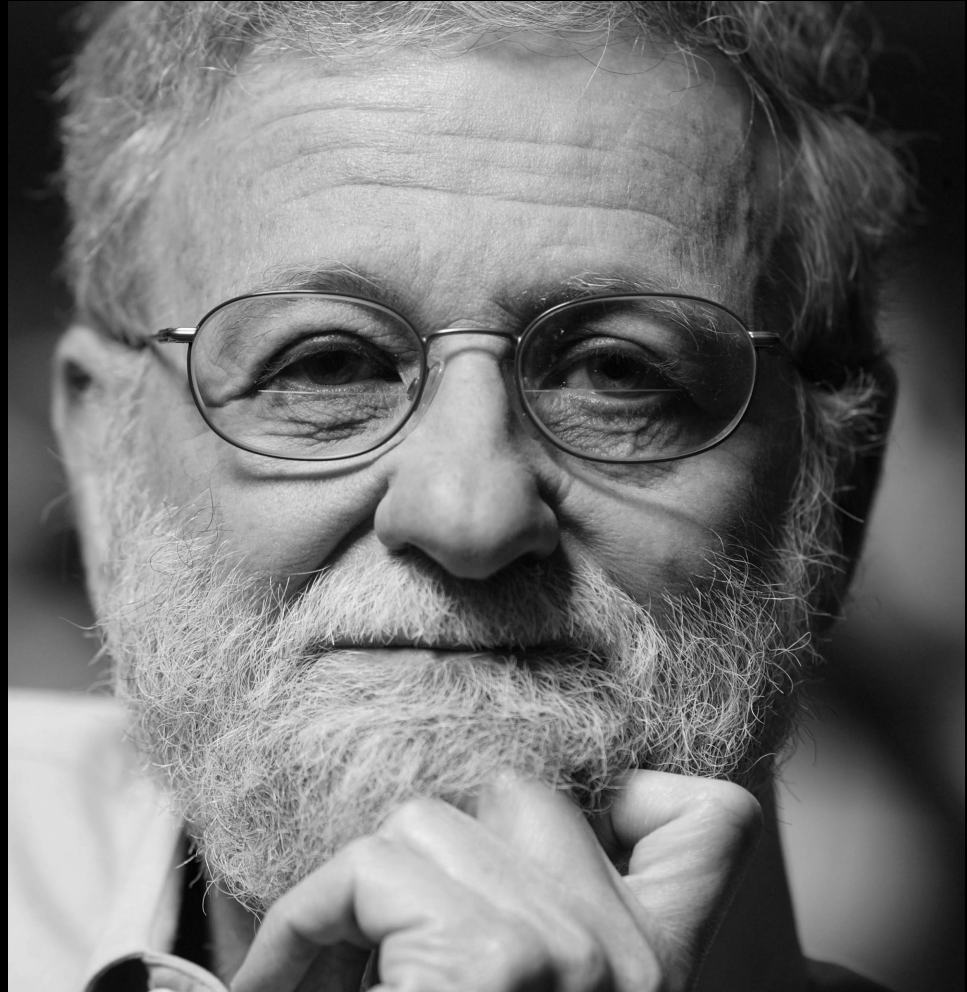






*"The value of a well-designed object is when it has such a rich set of affordances that the people who use it can do things with it that the designer never imagined."*

**-- Donald Norman**





Art of

The

Mike Amundsen  
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Hyper



media