TIMEFRAMING: TEMPORAL AESTHETICS IN DIGITAL COMICS

by

Erik Loyer

INT. WEB BROWSER, STEPWORKS STUDIO APPLICATION - JUNE 2020

ERIK LOYER enters screen right, presenting the video "erik-01" hidden beneath a black matte. The matte fades away, revealing Erik seated in an office, speaking directly to camera.

                    ERIK
          Hi, I'm Erik Loyer. I've been
          making and thinking about digital
          comics for over thirteen years
          now, and just as electronic
          literature is a medium distinct
          from print literature, so too are
          digital comics distinct from print
          comics. This might sound like an
          obvious thing to say, but I think
          it's is an important point to make
          because while the audio, visual,
          and interactive affordances of e-
          lit make it easy to distinguish
          from print literature, a huge
          amount what we think of as comic-
          ness is bound up in the visual,
          and as a result, digital comics,
          which share a lot of visual
          language with their print
          counterparts, are often seen
          simply as augmented print comics,
          print comics plus, and this
          attitude tends to obscure both the
          potential and the unique
          characteristics of the medium.

          So in this talk I'm going to dig
          into the most significant
          distinguishing feature between
          print and digital comics, and
          that's time.

MOIRA enters screen left, majority width, presenting the video "back to the future waiting GIF", which shows a clock face, without hands, swirling into infinity.

                    ERIK
          I'm doing this from the point of
          view of someone who is primarily a
          maker...

CARSTON enters screen left, majority width, his words displayed as white text on a black background instead of spoken aloud. ERIK exits screen right, but his voice can still be heard.

2.

                    CARSTON
          TEMPORAL AESTHETICS IN DIGITAL
          COMICS

                    ERIK
          ...in the hope that both makers
          and researchers will see something
          here...

                    CARSTON
          AN INTRODUCTION FOR MAKERS AND
          RESEARCHERS

                    ERIK
          ... that intrigues them enough to
          explore this medium more fully.

                    CARSTON
          BY ERIK LOYER

                    ERIK
          Basically, with this talk...

                    CARSTON
          ELO 2020

                    ERIK
          ...I want to point at digital
          comics and say...

ERIK enters screen left, full width.

                    ERIK
          "Hey, there are formal, aesthetic,
          and creative characteristics here
          that remain relatively unexplored
          -- let's change that."

CARSTON enters screen bottom, full height. ERIK exits
screen top.

                    CARSTON
          DEFINITIONS

ERIK enters screen bottom, full height, presenting the
video "erik-02".

                         ERIK
               Comics studies, of course, has
               seen its share of definition
               battles, with researchers and
               practitioners alike debating a
               variety of approaches to analyzing
               of the medium. This talk will
               build upon Daniel Merlin
               Goodbrey's "seven key
               characteristics" of comics,
               identified in his thesis...

TUAN enters screen left, full width, presenting the image
"goodbrey-thesis", which depicts the cover of Daniel Merlin
Goodbrey's doctoral thesis "The Impact of Digital Mediation
and Hybridisation on the Form of Comics". ERIK exits screen
right.

                         ERIK
               ..."The Impact of Digital
               Mediation and Hybridisation on the
               Form of Comics," published in
               2017.

ERIK enters screen left, minority width.

                         ERIK
               Goodbrey presents these seven
               characteristics not as an
               exhaustive or exclusionary
               definition, but as a collection of
               phenomena exhibited in various
               degrees. In other words, the
               things we call "comics" tend to
               embrace most of these practices.

               The seven characteristics are as
               follows...

CARSTON enters screen left, majority width, his words
displayed as black text on a red background.

                         CARSTON
               SPACE AS TIME

                         ERIK
               ...space as time (the essential
               move of comics to use physical
               space on the page to represent
               temporality)...

CARSTON's background color changes to a deep orange.

                    CARSTON
          JUXTAPOSITION OF IMAGES

                    ERIK
          ...simultaneous juxtaposition of
          images...

CARSTON's background color changes to a light orange.

                    CARSTON
          CLOSURE BETWEEN IMAGES

                    ERIK
          ...closure between images (Scott
          McCloud's term for the phenomenon
          in which readers fill in gaps of
          meaning across panels)...

CARSTON's background color changes to yellow.

                    CARSTON
          SPATIAL NETWORKS

                    ERIK
          ...spatial networks (the way in
          which the layout of the page is a
          complex and non-linear system)...

CARSTON's background color changes to yellow-green.

                    CARSTON
          READER CONTROL OF PACING

                    ERIK
          ...reader control of pacing...

CARSTON's background color changes to blue-green.

                    CARSTON
          TABLODIC IMAGES

                    ERIK
          ...tablodic images (which is a
          term of Goodbrey's derived from
          the concept of the tableau in
          theatre or photography, which he
          defines as "deliberately composed,
          framed and illustrated to
          represent key moments of narrative
          meaning"), and finally...

CARSTON's background color changes to blue.

                              CARSTON
                      WORD/IMAGE BLENDING

                              ERIK
                    ...word/image blending.

TUAN enters screen left, full width, his words displayed as
white text on a black background. ERIK exits screen right.

                              TUAN
                    THE DIGITAL QUESTION

ERIK enters screen left, full width, presenting the video
"erik-03".

                              ERIK
                    In the shift from print to digital
                    comics, each of Goodbrey's seven
                    characteristics undergoes changes
                    which are emblematic of the
                    differences between the mediums.
                    No single change, however, has a
                    greater impact than the way in
                    which the digital medium
                    reintroduces literal time to a
                    form which emerged as an
                    adaptation to its absence. Comics
                    represent time figuratively
                    because they cannot represent it
                    literally, but in the digital
                    medium, we get literal time back,
                    which leads to the question posed
                    by Scott McCloud...

TUAN enters screen left, minority width, presenting the
image "reinventing-comics", which depicts the cover of
Scott McCloud's book *Reinventing Comics*.

                              ERIK
                    ...in his 2000 book Reinventing
                    Comics...

KEIRA enters screen left, majority width, presenting the
image "rc-210", which depicts an excerpt from page 210 of
Reinventing Comics. ERIK exits screen right.

                              ERIK
                    ..."if partial sound and motion
                    can help create an immersive
                    experience...

KEIRA pans down the image, revealing the bottom row of
panels on the page.

                         ERIK
               ...won't full sound and motion do
               the job more effectively?" In
               other words, doesn't the existence
               of literal time...

ERIK enters screen left, minority width. TUAN exits screen
right.

                         ERIK
               ... in the digital medium make
               irrelevant the space/time "cheats"
               of comics? Shouldn't digital
               comics just become movies?

               It's a question that becomes
               especially pointed in the context
               of films...

RUSSELL enters screen top, full height, presenting the
video "hulk-excerpt," which depicts a split-screen sequence
from Ang Lee's 2003 film "Hulk". ERIK and KEIRA exit screen
bottom.

                         ERIK
               ...which attempt to adopt some of
               the formal characteristics of
               print comics, like Ang Lee's
               Hulk...

KEIRA enters screen right, minority width, presenting the
image "watchmen-cover", which depicts the cover of
"Watchmen: The Complete Motion Comic."

                         ERIK
               ...and in comics to which
               cinematic animation has been
               applied, like Warner Bros'
               Watchmen: The Motion Comic. The
               experiential results of
               experiments like these, which are
               sometimes more confounding than
               satisfying...

TUAN enters screen top, majority width and full height,
presenting the image "die-in-a-fire", which depicts a 2014
tweet from Shawn Eisenach reading, "Dear Motion Comics,
Nobody likes you. Die in a fire. Best -shawn". RUSSELL
exits screen bottom.

                         ERIK
               ...may lead some to question why
               such hybrids are being attempted
               in the first place.

CARSTON enters screen top, full height. TUAN and KEIRA exit screen bottom.

                    CARSTON
          CASE STUDY: WATCHMEN MOTION COMIC

MOIRA enters screen bottom, full height, presenting the video "watchmen", which depicts a sequence from "Watchmen: The Complete Motion Comic." CARSTON exits screen top.

ERIK enters screen right, minority width, presenting the video "erik-04".

                    ERIK
          Let's take a moment to look at
          Watchmen: The Motion Comic in the
          context of Goodbrey's seven
          characteristics of comics.
          First...

CARSTON enters screen top, minority width and height, his words displayed as black text on a red background.

                    CARSTON
          SPACE AS TIME

                    ERIK
          ... space as time. Watchmen
          completely does away with this
          aspect of comics; panels are
          turned into temporal animations
          which unfold in real time. Next...

CARSTON's background color changes to a deep orange.

                    CARSTON
          JUXTAPOSITION OF IMAGES

                    ERIK
          ...juxtaposition of images. Again,
          this aspect of comics is
          eliminated; all visuals appear
          full frame.

CARSTON's background color changes to a light orange.

                    CARSTON
          CLOSURE BETWEEN IMAGES

                    ERIK
          Closure between images. Where you
          have no juxtaposition, there can
          be no closure in the sense that
          print comics provide it -- instead
          we perceive the filmic closure of
          montage.

CARSTON's background color changes to yellow.

                    CARSTON
          SPATIAL NETWORKS

                    ERIK
          Spatial networks. These are
          present to some degree, in that
          any image implies some kind of
          spatial network, but they lack the
          complexity and time-independence
          of the multi-panel layouts found
          in many comics.

CARSTON's background color changes to yellow-green.

                    CARSTON
          READER CONTROL OF PACING

                    ERIK
          Reader control of pacing. Also
          gone, the viewer has little
          control beyond pausing the
          playback.

CARSTON's background color changes to blue-green.

                    CARSTON
          TABLODIC IMAGES

                    ERIK
          Tablodic images. This quality is
          still very much intact here;
          considered theatrical compositions
          based on the original artwork of
          Dave Gibbons are present
          throughout the work.

CARSTON's background color changes to blue.

                    CARSTON
          WORD/IMAGE BLENDING

                    ERIK
          Word/image blending is also
          intact, given that the dialogue
          balloons of the print version are
          retained. So, of Goodbrey's seven
          key characteristics, Watchmen
          keeps at most two and a half. This
          is typical with most U.S. works
          marketed as "motion comics," which
          might have something to do with
          the negative response we saw
          earlier, one that's not unusual to
          see from fans of print comics.

MOIRA enters screen right, full width, her words displayed
as white text on a black background. ERIK and CARSTON exit
screen left.

                    MOIRA
          WHAT COMICS AND TIME DO TOGETHER

ERIK enters screen bottom, full height, presenting the
video "erik-05".

                    ERIK
          In *Reinventing Comics*, after
          McCloud poses his question about
          temporality and immersion, he goes
          on to articulate the "infinite
          canvas"...

MOIRA enters screen left, minority width, presenting the
image "rc_223", which depicts page 223 of *Reinventing
Comics*.

                    ERIK
          ...as an alternative to more
          awkward mergings of filmic and
          comic language, an approach which
          many creators have explored with
          great success...

TUAN enters screen right, minority width, presenting the
video "lore-olympus", which shows a vertical scroll through
several panels from the comic "Lore Olympus." MOIRA exits
screen left.

                    ERIK
          ...as in Rachel Smythe's "Lore
          Olympus."
                         (MORE)

                         ERIK (CONT'D)
               Less attention, however, has been
               given to articulating an
               aesthetics of time which might
               coexist with the seven
               characteristics of comics
               identified by Goodbrey.

TUAN exits screen right.

                         ERIK
               For while those characteristics
               may largely define the expressive
               potential of comics as a medium,
               and while they may have arisen as
               a response to the lack of literal
               time in print, the reintroduction
               of time in the digital medium does
               not, by default, negate their
               impact. It does, however,
               profoundly alter the ways in in
               which they work. Goodbrey has
               explored some of these effects in
               his research, and I'd like to
               propose that we expand and
               formalize the analysis of these
               practices under the term
               "timeframing."

CARSTON enters screen bottom, full width, his words
displayed as green text on a black background. ERIK exits
screen top.

                         CARSTON
               TIMEFRAMING

CARSTON enters screen bottom. ERIK presents the video
"erik-06" offscreen.

                         CARSTON
               THE CREATIVE JUXTAPOSITION OF
               TEMPORAL VIGNETTES

                         ERIK
               Timeframing is the "creative
               juxtaposition of temporal
               vignettes" -- representations of
               events unfolding over time which
               are bounded, both spatially and
               temporally.

CARSTON's text turns white.

                         CARSTON
               SPATIALLY BOUNDED

                              ERIK
                    A vignette's spatial bounds may be
                    obvious, like the sharply
                    defined...

TUAN enters screen left, full width, presenting the video
"thomascrownaffairsplitscreenmontage-mov", which depicts a
key split-screen sequence from the 1968 film "The Thomas
Crown Affair." CARSTON exits screen right.

                              ERIK
                    ...frames of a split-screen
                    sequence in a movie like Norman
                    Jewison's The Thomas Crown
                    Affair...

The film excerpt plays out.

MOIRA enters screen bottom, full height, presenting the
video "HoboLobo", which depicts a screen capture from the
website "Hobo Lobo of Hamelin". TUAN exits screen top. ERIK
presents the video "erik-07" offscreen.

                              ERIK
                    ...or they may be subtle, like the
                    overlapping loops of a digital
                    comic like Stevan Živadinović's
                    Hobo Lobo of Hamelin.

The screen capture plays out.

CARSTON enters screen right, full width. ERIK presents the
video "erik-08" offscreen. MOIRA exits screen left.

                         CARSTON
               TEMPORALLY BOUNDED

                              ERIK
                    The temporal bounds of a
                    vignette...

TUAN enters screen right, full width, presenting the video
"GIF Animation from American Gods", a brief looping excerpt
from the television show *American Gods* featuring actor
Orlando Jones looking at a pocket watch. CARSTON exits
screen left.

                              ERIK
                    ...might likewise be obviously
                    clamped, as in a GIF animation
                    with a jarring loop point...

MOIRA enters screen bottom, full height presenting the image "coco-projector-429", a loop of a fashion model sitting next to a film projector. ERIK presents the video "erik-09" offscreen. TUAN exits screen top.

                    ERIK
          ...more subtle, as in a
          Cinemagraph, a genre of GIF
          animation which emerged in
          connection with fashion
          photography...

TUAN enters screen right, full height, presenting the video "zelda-idle", an excerpt of a YouTube video showing Link's idle animations from *The Legend of Zelda: The Ocarina of Time*. ERIK presents the video "erik-10" offscreen. MOIRA exits screen left.

                    ERIK
          ...or even algorithmic, as with
          the randomly selected idle
          animations of a video game
          character.

          A temporal vignette is time in a
          box, whether that box is literally
          visible or not...

ERIK enters screen right, full width. TUAN exits screen left.

                    ERIK
          ...and timeframing puts boxes of
          time in dialogue...

CARSTON enters screen bottom, full height. ERIK exits screen top.

                    ERIK
          with each other. In doing so, as a
          practice...

                    CARSTON
          TIMEFRAMING

                    ERIK
          ... it inhabits the space between
          the binaries of still...

KEIRA enters screen top, minority height, her words displayed as black text on a white background.

                    KEIRA
          STILL

                              ERIK
                    ...and motion...

RUSSELL enters screen bottom, minority height, his words
displayed as black text on a white background. KEIRA exits
screen top.

                              RUSSELL
                    MOTION

                              ERIK
                    ...between parallel...

KEIRA enters screen top, minority height. RUSSELL exits
screen bottom.

                              KEIRA
                    PARALLEL

                              ERIK
                    ...and serial...

RUSSELL enters screen bottom, minority height. KEIRA exits
screen top.

                              RUSSELL
                    SERIAL

                              ERIK
                    ...between reading...

KEIRA enters screen top, minority height. RUSSELL exits
screen bottom.

                              KEIRA
                    READING

                              ERIK
                    ...and watching.

RUSSELL enters screen bottom, minority height. KEIRA exits
screen top.

                              RUSSELL
                    WATCHING

ERIK enters screen left, full width, presenting the video
"erik-11". KEIRA and CARSTON exit screen right.

                    ERIK
          Instead of making the visual
          language of comics obsolete,
          timeframing leverages its grammar
          to generate complex compositions
          driven by the independence of
          space and time made possible in
          digital media. If we want to more
          consciously engage the practice of
          timeframing, it can be helpful to
          map out the aesthetics of mediated
          time. What are some of the
          different...

CARSTON enters screen left, majority width.

                    CARSTON
          AFFECTIVE PROPERTIES

                    ERIK
          ...affective properties of
          temporal vignettes?

          For one, temporal vignettes can be
          naturalistic: bounded, but without
          calling attention to themselves as
          such. As an example, let's turn to
          Upgrade Soul...

KEIRA enters screen left, full width, presenting the image
"upgrade-soul-title", which depicts key art from the app
Upgrade Soul. ERIK exits screen right.

                    ERIK
          ...the digital comic I developed
          in collaboration with writer
          illustrator Ezra Claytan Daniels,
          released in 2012.

MOIRA enters screen top, full height, presenting the video
"us05", which depicts a screen capture from *Upgrade Soul*
featuring a close-up of the character Molly, who blinks
intermittently. KEIRA exists screen bottom.

                    ERIK
          In this panel, the intermittent,
          randomized eye blinks of the
          character create a sense of
          naturalism, that you are looking
          at this person in real time, with
          a boundedness that is intended to
          remain unexamined.
                    (MORE)

                         ERIK (CONT'D)
               Easily forgotten is the fact that
               this can't literally be a real-
               time scene, because no actual
               person can stand forever in a
               fixed position while only blinking
               their eyes. Perhaps what is going
               on here is that the visual cues
               help us to build a mental model of
               how much time is being
               represented, and, seeing no
               contradictions, we accept it.

TUAN enters screen bottom, majority height, presenting the
image "US iPad Screenshot 203.png", which depicts a closeup
of the character Del from *Upgrade Soul*, who is yelling with
a surprised expression.

                         ERIK
               By contrast, if we were to add eye
               blinks to this panel from another
               point in the story, we would
               experience what could be described
               as a kind of unpleasant "temporal
               dissonance": We can see from the
               girl's expression, and the
               position of her pigtails, that
               this panel represents a near-
               instantaneous slice of time; eye
               blinks would contradict that
               impression by implying that a much
               longer span is being shown,
               breaking our mental model of the
               panel as a temporal vignette.

KEIRA enters screen left, full width, presenting the image
"champagne-overflow" a looping GIF of a champagne bottle
endlessly pouring its contents into a glass. ERIK presents
the video "erik-12" offscreen. TUAN and MOIRA exit screen
right.

                         ERIK
               Temporal vignettes can be iconic:
               creating a sense of a heightened,
               dreamlike reality, often seen in
               Cinemagraphs like this one. Here,
               the unreality of the image is the
               point; it's temporal dissonance
               deployed in a pleasing way.

MOIRA enters screen top, full height, presenting the video
"nawlz", which depicts a screen capture from the digital
comic *Nawlz*. ERIK presents the video "erik-13" offscreen.
KEIRA exits screen bottom.

                         ERIK
              Temporal vignettes can be
              expressionistic: departing even
              further from the approximation of
              reality into animation which more
              than anything else suggests a
              mood, a tone, a point of view,
              character. This sequence from
              Sutu's Nawlz, with its bouncy
              morphs, exemplifies this kind of
              time.

TUAN enters screen top, full height, presenting the video
"koyaanisqatsi", which depicts an excerpt from the 1982
film *Koyaanisqatsi*. ERIK presents the video "erik-14"
offscreen. MOIRA exits screen bottom.

                         ERIK
              Temporal vignettes can also be
              rhythmic--emphasizing repeated
              patterns, perhaps accompanied by
              music.

The film excerpt plays out.

ERIK enters screen right, full width, presenting the video
"erik-15". TUAN exits screen left.

                         ERIK
              And they can combine multiple
              characteristics, as in this
              example from "Moontagne"...

MOIRA enters screen right, half width, presenting the image
"moontagne", which depicts a single looping GIF from the
comic "Moontagne", in which a character dives in and out of
a liquid sphere.

                         ERIK
              ...a GIF comic by Oscar Langevin
              featured at the Angouelme festival
              in 2014. This panel could be said
              to be rhythmic, expressionistic,
              and iconic, all at once.

              Further, the time represented
              within a given vignette can be of
              different kinds: diegetic time
              perceived by the characters, non-
              diegetic elements like camera
              moves that only the reader is
              aware of, and extra-diegetic
              temporality occurring outside of
              the story in its interface.

CARSTON enters screen bottom, full height, his words
displayed as black text on a white background. ERIK and
MOIRA exit screen top, and ERIK presents the video
"erik-16" offscreen.

                    CARSTON
          TIMEFRAMING IS EVERYWHERE

                    ERIK
          Looking broadly at our digital
          media environment...

ERIK enters screen left, full width. CARSTON exits screen
right. KEIRA presents the video "final-cut-excerpt"
offscreen.

                    ERIK
          ...it becomes clear that we spend
          much of our time within highly
          elaborate timeframed compositions:
          collections of temporally bounded
          units layered and juxtaposed. Even
          a VR experience, with its illusion
          of seamless presence, is often
          made up of many time-limited
          animations composed to encourage
          immersion, with their seams
          largely erased; by contrast...

KEIRA enters screen left, full width, her video depicting a
screen capture of an editing session in Final Cut Pro. ERIK
exits screen right.

                    ERIK
          ...in a video editing program,
          those seams are explicit, arranged
          to facilitate the construction of
          singular linear video streams.

MOIRA enters screen left, full width, presenting the video
"the-boat-excerpt", which depicts a screen capture from the
digital comic *The Boat*. KEIRA exits screen right.

                    ERIK
          In a digital comic, the seams are
          likewise visible, but for a
          different purpose: to serve the
          expressive aims enabled by multi-
          panel compositions and the other
          characteristics which make comics
          unique.

TUAN enters screen left, full width, presenting the video "collier-goodbye", which depicts the end of a Zoom master class with Jacob Collier and a grid full of students. ERIK presents the video "erik-17" offscreen. MOIRA exits screen right.

                    ERIK
          And of course, of late we have
          become all too familiar with a
          very specific genre of
          timeframing: the Zoom call, with
          its semantic fusion of panel with
          person.

ERIK enters screen left, minority width.

                    ERIK
          These boxes, though they may be
          broadcasting live video, are also
          temporal vignettes; they are
          spatially and temporally bounded
          -- they do not last forever, as we
          see here in this mass exodus of
          students from a USC master class
          with Jacob Collier.

CARSTON enters screen left, full width, his words displayed as black text on a white background. TUAN and ERIK exit screen right, as ERIK presents the video "erik-18" offscreen.

                    CARSTON
          RULE-BASED COMICS

                    ERIK
          The practice of timeframing
          leverages the aesthetics of
          bounded time...

ERIK enters screen bottom, full height. CARSTON exits screen top.

                    ERIK
          ...and its juxtaposition to
          construct sophisticated mechanisms
          out of time and space. In
          traditional print comics, certain
          kinds of layouts have always
          gestured towards this phenomenon,
          creating the sense of parts
          combining to form a kind of visual
          machine.

TUAN enters screen right, half width, presenting the image
"oubapo-cover", depicting the cover of the first issue of
the journal *Oubapo*.

                    ERIK
          The Oubapo group, founded in 1992
          and directly inspired by their
          forbears in constrained writing,
          the Oulipo...

CARSTON enters screen right, majority width, his words
displayed as black text on a white background.

                    CARSTON
          OULIPO

          OULIP

          OULI

          OUL

          OU

          OUB

          OUBA

          OUBAP

          OUBAPO

                    ERIK
          ...have published several volumes
          of formally constrained comics
          like these.

MOIRA enters screen top, majority width, full height,
presenting the image "oubapo-page", which depicts a page
from the journal featuring a comic with an isometric
layout.

KEIRA enters screen right, full width, presenting the image
"building-stories-box", which depicts the enclosing box of
Chris Ware's *Building Stories*. CARSTON and MOIRA exit
screen left. ERIK presents the video "erik-18-5" offscreen.

                    ERIK
          And the works of Chris Ware,
          including 2012's *Building Stories*,
          often include...

MOIRA enters screen right, half width, presenting the image
"building-stories-page", which depicts a page from *Building
Stories* featuring a complex set of panels arranged around
an apartment building.

                    ERIK
          ...elaborate graphic contraptions
          that almost resemble board games
          in their rule-bound design.

KEIRA enters screen right, full width, presenting the video
"murat-excerpt", depicting a screen capture from the
digital comic *Murat*. KEIRA and MOIRA exit screen left.

                    ERIK
          In the digital space, the logic
          implied by these layouts can be
          made actual, as in *Murat*, a 2014
          piece by the Motiv Collective from
          the Czech Republic. Each layout of
          this work is a unique device which
          the user must interact with to
          proceed through the story.

The screen capture plays out.

ERIK enters screen bottom, full height, presenting the
video "erik-19". KEIRA exits screen top.

                    ERIK
          Timeframing can frequently convey
          a sense that panels are themselves
          agents in a dynamic composition,
          responding to their surroundings
          and to the actions of the user.
          Perhaps one of our first popular
          encounters with this phenomenon
          came in the form of...

RUSSELL enters screen left, full width, presenting the
video "responsive-design-fast", depicting the effects of
resizing the browser window of a responsive website. ERIK
exits screen right.

                    ERIK
          ...responsive web design, a
          technique which emerged around
          2010, in which a web page contains
          logic determining how it should
          render its contents depending on
          the size its containing window.

ERIK enters screen left, full width, presenting the video
"erik-19-5". RUSSELL exits screen right.

                    ERIK
          Digital comics allow us to extend
          this approach to the panel -- a
          panel that...

TUAN enters screen left, full width, presenting the video
"gorogoa-wide", depicting a screen capture from the game
Gorogoa.

                    ERIK
          ... unlike its print counterpart,
          can now know what it contains, and
          how to present its contents in an
          optimal format for its aperture.

          Of course, the work of a "smart"
          panel like this need not be
          limited to layout, but can
          function on the level of story as
          well. We see this in Jason
          Roberts' 2017 game *Gorogoa*, in
          which multilayered panels can be
          pulled apart by the player and
          used to recompose the past with
          the present, solving conundrums of
          image and story while unlocking
          new spaces to explore.

CARSTON enters screen left, full width, his words displayed
as black text on a white background. ERIK exits screen
right, presenting the video "erik-20" offscreen.

                    CARSTON
          THE STATE OF DIGITAL COMICS

                    ERIK
          One thing many of these rule-based
          digital comics...

ERIK enters screen left, full width. CARSTON exits screen
right.

                    ERIK
          ...have in common is that they are
          state machines. By interacting
          with them, the user causes them to
          transition from state to state,
          and in each state certain
          possibilities are active. This is
          nothing new for computational
          media, but it took time to
          understand its implications for
          comics. A key step was French
          comic artist Yves Bigerel's...

KEIRA enters screen left, full width, presenting the image
"aboutdigitalcomics-01", which depicts a frame from Yves
Bigerel's comic essay "About Digital Comics". ERIK exits
screen right.

                    ERIK
          ...Yves Bigerel's 2009 work "About
          Digital Comics", which explicitly
          tackles the potential of the
          medium.

KEIRA presents the image "aboutdigitalcomics-02", a second
frame from the essay.

                    ERIK
          Bigerel, under the pen name Balak,
          draws a character who bemoans
          contemporary digital comics'
          reliance on "fancy gimmicks coming
          from the temporal world to ruin
          the experience"...

KEIRA presents the images "aboutdigitalcomics-03" through
"aboutdigitalcomics-09", and "aboutdigitalcomics-16"
through "aboutdigitalcomics-24", all frames from the essay.

                    ERIK
          ...and posits that the real
          innovation lies in simple changes
          in state. He notes that anything
          in a digital comic can change from
          one state to the next, and those
          changes go beyond what's possible
          in print to create a medium that
          fuses spatial and temporal
          montage, while simultaneously
          enabling the author to be "precise
          to the word" -- a familiar
          affordance to aficionados of
          electronic literature.

CARSTON enters screen bottom, full height, his words
displayed as black text on a white background. ERIK
presents the video "erik-21" offscreen, as KEIRA exits
screen top.

                    CARSTON
          TIME AND AGENCY

                    ERIK
          I would suggest that Balak's
          frustration...

ERIK enters screen bottom, full height. CARSTON exits
screen top.

>   ERIK
>   ...with the clumsiness of early
>   digital comics arises from the
>   fact that creators were still
>   learning how to do timeframing --
>   how to deploy bounded time. Many
>   of these works would promise
>   interactivity, but then yank it
>   away in order to play a pre-
>   rendered animation. As Goodbrey
>   puts it...

CARSTON enters screen right, his words displayed as as
caption with black text on a yellow background,
superimposed over ERIK's video, which blurs.

>   CARSTON/ERIK
>   "...the reader's control of pacing
>   in a comic relies on 'negotiating
>   the control of their own reading
>   time alongside the fictional time
>   depicted in the
>   narrative' (Gazzard and Goodbrey
>   2014)...
>
>   "However, digital comics which
>   include animations of fixed
>   duration can disrupt 'the normal
>   rhythm of this relationship...
>
>   "...by adding what in videogame
>   terms can be described as 'cut-
>   scenes;' moments of animation or
>   animated transitions where control
>   is taken away from the
>   reader' (ibid).
>
>   "This can result in an
>   unsatisfying reading experience in
>   which the reader's sense of
>   'agency' (Murray 1997) within the
>   rhythm of their reading is
>   eroded." (Goodbrey 2017)

CARSTON exits screen left, and ERIK comes back into focus.

                         ERIK
               Unlike in games, where the
               alternation between gameplay and
               cutscenes can provide a break from
               continuous frenetic activity, in
               an experience inspired by print
               comics, where reader control of
               pacing is essential, inconsistent
               control leads quickly to
               frustration.

               In "About Digital Comics"...

MOIRA enters screen right, majority width, presenting the
image "ABD 2", depicting a frame from "About Digital
Comics".

                         ERIK
               ...Balak simplifies the problem of
               temporality to a degree where the
               source of this frustration can be
               seen more clearly. And as a
               result, his work caught the
               attention of editor Joe Quesada at
               Marvel...

TUAN enters screen top, majority width and full height,
presenting the video "infinite-comics-excerpt", depicting a
screen capture of a Marvel Infinite Comic. MOIRA exits
screen bottom.

                         ERIK
               ... who hired him to contribute to
               their digital imprint Infinite
               Comics, and also directly inspired
               Mark Waid's...

KEIRA enters screen top, majority width and full height,
presenting the image "thrillbent", a screenshot of the
Thrillbent website. TUAN exits screen bottom.

                         ERIK
               ...Thrillbent comics, which
               function in a similar way.

CARSTON enters screen left, full width, his words displayed
as black text on a white background. ERIK and KEIRA exit
screen right. ERIK presents the video "erik-22" offscreen.

                         CARSTON
               A SPACE FOR TIME

                         ERIK
               From a timeframing perspective...

ERIK enters screen bottom, full height. CARSTON exits
screen top.

>   ERIK
>   ...Balak's edict of "no temporal
>   gimmicks" can now be seen as
>   something of an extreme position.
>   Consistency in temporal logic need
>   not exile literal time from the
>   field, as was clearly demonstrated
>   years later, when Snapchat
>   created...

RUSSELL enters screen left, presenting the video "viborg-
window", which depicts a series of Instagram stories
approaching the same window at different times on different
days.

>   ERIK
>   ... and Instagram widely
>   popularized the video-driven
>   "story" format which dominates
>   social media today. A collective
>   realization that the problem with
>   many early digital comics was not
>   temporality itself, but agency,
>   allowed artists to continue to
>   explore the practice of
>   timeframing in more complex ways,
>   while remaining sensitive to the
>   readerly characteristics of
>   comics. I put this realization to
>   work in designing...

TUAN enters screen bottom, presenting the image "Panoply
logo". ERIK exits screen top.

>   ERIK
>   ...Panoply, the digital comics
>   tool used to create Upgrade Soul,
>   actively discouraging...

KEIRA enters screen bottom, presenting the video "panoply-
city-comic", depicting a screen capture from an unreleased
Panoply comic entitled "Balcony". RUSSELL and TUAN exit
screen top.

>   ERIK
>   ...the use of one-shot animations
>   in the tool's architecture in
>   favor of real-time rendered
>   gesture-driven transitions which
>   the user can always navigate both
>   forwards and backwards, at will.

MOIRA enters screen bottom, presenting the video "us05",
which depicts a screen capture from the digital comic
"Upgrade Soul". KEIRA exits screen top. ERIK presents the
video "erik-23" offscreen.

                    ERIK
          Upgrade Soul provided
          opportunities to explore
          temporality on multiple levels --
          one of which came in the use of
          audio. Several scenes of the comic
          feature electronic beeps which
          signify medical crisis. Since
          these beeps occur across multiple
          panels at once, I animated and
          scored them create cross-panel
          rhythms that evolve as the story
          advances, resulting in an
          additional channel through which
          musical suspense could be
          delivered.

The screen capture plays out.

ERIK enters screen left, majority width, presenting the
video "erik-24", followed by KEIRA, also entering screen
left, minority width, presenting the image "florence",
which depicts the main character of the app *Florence*.

                    ERIK
          Florence, a 2018 release from the
          Melbourne-based Mountains game
          studio, designed by Ken Wong is a
          master class in interactive
          timeframing for narrative
          purposes, and is almost certainly
          the most commercially successful
          digital comic ever made.
          Ironically, marketing for the game
          never refers to it as a comic,
          even though it exemplifies all of
          Goodbrey's seven characteristics
          of the medium.

TUAN enters screen top, minority width, full height,
presenting the video "florence-excerpt", depicting a screen
capture from the app.

                         ERIK
               The tale of a young woman's coming
               of age, the story proceeds at the
               user's pace and frequently
               juxtaposes multiple complementary
               temporalities that work together
               effortlessly.

TUAN expands to cover the full screen. The screen capture
plays out.

CARSTON enters screen top, full height, his words displayed
as black text on a white background. TUAN exits screen
bottom. ERIK presents the video "erik-25" offscreen.

                         ERIK
               Modern digital media is a constant
               collage...

ERIK enters screen right, full width. CARSTON exits screen
left.

                         ERIK
               ...of temporalities, the
               deliberate orchestration of which
               is a discipline which deserves
               recognition and research.
               Understanding of this discipline,
               rudimentary though it may be at
               this stage, has already been key
               to the ongoing maturation of
               digital comics as a medium, and
               essential to rebutting some of the
               more reactionary postures that
               rejected temporality as
               fundamentally incompatible with
               sequential art. With further
               exploration from both makers and
               researchers, timeframing has the
               potential to evolve into an even
               more compelling vehicle for
               artistic expression. Thank you.

CARSTON enters screen bottom, full height, his words
displayed as black text on a white background.

                         CARSTON
               thank you / erikloyer.com
               made with stepworks / step.works

MOIRA enters screen bottom, inset, presenting the video
"stepworks-studio", depicting a time-lapse screen capture
of ERIK assembling this very talk in Stepworks.

The screen capture plays out.

FADE OUT.