AVANT-GARDE MECHANICS: MONTAGE STRUCTURES IN
GERMAINE KRULL’S MÉTAL AND JORIS IVENS’ DE BRUG

By
ERIN ELISE MCCLENATHAN
(Under the Direction of Nell Andrew)

ABSTRACT
This study reunites Germaine Krull’s photographic portfolio Métal and Joris Ivens’ film De Brug to consider the relationship between political will and aesthetics in these 1928 productions. Most often treated as separate experiments in mechanical abstraction, this examination aims to reveal the shared avant-garde milieu that informed the conception and execution of each work and to understand the legibility of their politicized amalgamations of biology and technology. An analysis of Krull’s and Ivens’ participation in the publication of the Dutch journals i10 and Filmliga, for example, allows us to understand how their engagements with photographic and filmic montage techniques shaped the constructions of both Métal and De Brug. At work in Krull’s portfolio and Ivens’ film are Sergei Eisenstein’s and Vsevolod Pudovkin’s Soviet montage theories and László Moholy-Nagy’s New Vision strategies. While these formal structures constituted a certain aesthetic accessibility for contemporary viewers, they may have conversely obscured the projects’ radical political aspirations.
INDEX WORDS:  Germaine Krull, Joris Ivens, Métal, De Brug, Soviet montage, Sergei Eisenstein, Vsevolod Pudovkin, Avant-gardism, Filmliga, i10:

Internationale Revue, Walter Benjamin, Peter Bürger
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By

ERIN ELISE MCCLENATHAN

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by

ERIN ELISE MCCLENATHAN

Major Professor: Nell Andrew

Committee: Alisa Luxenberg
            Isabelle Loring Wallace

Electronic Version Approved:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
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DEDICATION

With love to Grandma Jean,

for endearing me to 1928
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>.................................................................................................................</td>
<td>v</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>.............................................................................................................</td>
<td>vii</td>
</tr>
<tr>
<td>CHAPTER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 INTRODUCTION</td>
<td>..................................................................................................................</td>
<td>1</td>
</tr>
<tr>
<td>2 APPROACH TO MATERIALS: <em>i10 AND FILMLIGA</em></td>
<td>........................................................................................................</td>
<td>12</td>
</tr>
<tr>
<td>3 MONTAGE METHODS: COLLISION V. LINKAGE</td>
<td>...........................................................................................................</td>
<td>25</td>
</tr>
<tr>
<td>4 FACTURE AND (DYS)FUNCTION</td>
<td>...............................................................................................................</td>
<td>45</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>...................................................................................................................</td>
<td>55</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Germaine Krull, <em>Pont Suspendu de Rotterdam</em>, 1926</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>Joris Ivens, Film Still #1 from <em>De Brug</em>, 1928</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Germaine Krull, Untitled (<em>Métal</em>, Plate 47), 1928</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>“PHOTO GERMAINE KRULL; ‘DE BRUG’ JORIS IVENS”</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>From <em>i10: Internationale Revue</em>, no. 13 (1928)</td>
<td>22</td>
</tr>
<tr>
<td>6</td>
<td>From László Moholy-Nagy, <em>Painting, Photography, Film</em></td>
<td>23</td>
</tr>
<tr>
<td>7</td>
<td>From A. Boeken, “Bij een fragment van ‘De brug’ van Joris Ivens”</td>
<td>24</td>
</tr>
<tr>
<td>8</td>
<td>From Eisenstein, “A Dialectic Approach to Film Form”</td>
<td>35</td>
</tr>
<tr>
<td>9</td>
<td>Germaine Krull, Untitled (<em>Métal</em>, Plate 14), c.1925-1928</td>
<td>36</td>
</tr>
<tr>
<td>10</td>
<td>Germaine Krull, Untitled (<em>Métal</em>, Plate 23), c.1925-1928</td>
<td>37</td>
</tr>
<tr>
<td>11</td>
<td>Germaine Krull, Untitled (<em>Métal</em>, Plate 16), 1928</td>
<td>38</td>
</tr>
<tr>
<td>12</td>
<td>Germaine Krull, Untitled (<em>Métal</em>, Plate 22), 1928</td>
<td>39</td>
</tr>
<tr>
<td>13</td>
<td>Joris Ivens, Film Still #2 from <em>De Brug</em>, 1928</td>
<td>40</td>
</tr>
<tr>
<td>14</td>
<td>Joris Ivens, Film Still #3 from <em>De Brug</em>, 1928</td>
<td>41</td>
</tr>
<tr>
<td>15</td>
<td>Joris Ivens, Film Still #4 from <em>De Brug</em>, 1928</td>
<td>42</td>
</tr>
<tr>
<td>16</td>
<td>Joris Ivens, Film Still #5 from <em>De Brug</em>, 1928</td>
<td>43</td>
</tr>
<tr>
<td>17</td>
<td>Joris Ivens, Film Still #6 from <em>De Brug</em>, 1928</td>
<td>44</td>
</tr>
<tr>
<td>18</td>
<td>Germaine Krull, <em>Self-Portrait</em>, 1925</td>
<td>54</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

Among the sixty-four images in Germaine Krull’s 1928 photographic portfolio, *Métal*, is an image of riveted iron, a speckled skin that follows the curved backbone of a bridge (Fig. 1). Obscuring a dwarfed industrial landscape below it, the bridge’s radical thrust pushes both skyward and downward toward the camera’s lens, breaking past the constricting borders of the photograph’s frame. Although this image represents only a fragment, Krull’s inclusion of additional parts of the bridge’s anatomy—such as the girders crisscrossing the upper left of the image—provides us with a hint of the complete structure. The photographer’s dynamic composition suggests that this fragment is not meant to convey brokenness or stasis but to incite the beholder’s participation in mentally constructing the space that surrounds this abstraction. Krull’s image acts as an enticement, but viewers are asked to leave the photograph’s borders to conceive of the fragment’s whole body.

Joris Ivens’ *De Brug* (*The Bridge*, 1928) depicts in film the same physical object that Krull suggests in her photograph, a *hefbrug* (or vertical-lift bridge) in Rotterdam. A still shot from *De Brug* reveals how similar Ivens’ cinematic point of view is to the one adopted by Krull’s photographic composition—a segment of the bridge’s backbone again shown juxtaposed with a cityscape below (Fig. 2).
Yet Ivens’ slightly distanced and elevated viewpoint, along with the motion of a train’s steam in this segment of the film, indicates the divergent possibilities and limits of each artist’s medium. Indeed, through the upward panning of his camera, Ivens’ film schematizes the space for his audience, completing the motion that Krull’s image forces each beholder to conjure individually.

Krull does not focus exclusively upon *De Hef* in *Métal* as Ivens does in *De Brug*; nevertheless, these two images of the bridge suggest conceptual bridges between the portfolio and the film that are evident throughout each project. Krull depicts a variety of industrial implements in her sheaf of unbound collotype prints. Through her close cropping, dynamic, angular forms, and multiple exposures, she severs gears, pipes, and cranes from their utilitarian function. Her minimal identification of each image by number, omitting both date and location, enhances her photographic abstraction. Ivens too generalizes his film’s more fixed subject in his refusal to contextualize *De Brug*. Although, unlike Krull, Ivens clearly focuses upon the same object throughout his fourteen-minute film, his generic title encourages the viewer to focus upon the individual parts of the *hefbrug* rather than its utility to the city of Rotterdam. Ivens’ concentration upon fragmented parts of the bridge and their interaction with other mechanical as well as biological forms in his camera’s panning along the diagonals of *De Brug*’s metal structure and in several motionless, anti-cinematic shots in fact recall Krull’s photographs in *Métal*—compositions which in turn function as film stills in her portfolio.
Both *Métal* and *De Brug* made their debuts in Paris in 1928 when Krull’s portfolio was published by the Librarie des Arts Décoratifs and Ivens’ film was screened both in the French capital and in Amsterdam.¹ The audiences for *Métal* and *De Brug* surely overlapped as both artists were part of an international but intimate avant-garde collective in interwar Europe. Furthermore, Krull and Ivens had arrived in Paris in the midst of a complicated romantic entanglement, a relationship that seems to have involved both physical and creative attraction. Their extra-artistic love affair, however, ended before 1928, prior even to their marriage in 1927, which was a practical act designed to provide the country-less Krull with a passport.²

Despite obvious aesthetic congruencies between the two projects, scholars most often frame *Métal* not through the portfolio’s connection to *De Brug* but within a larger narrative of Krull’s commercial success as a woman photographer who was concurrently indebted to her intricate web of avant-garde acquaintances. For example, in *Art Since 1900* Benjamin Buchloh briefly discusses Krull along with several New Woman photographers who created marketable portraits and advertising images in Weimar Germany, characterizing

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¹ For discussions of *Métal’s* debut, see Kim Sichel, *Germaine Krull: Photographer of Modernity* (Cambridge, MA: MIT Press, 1999), 77; and David Travis, “In and of the Eiffel Tower.” *Art Institute of Chicago Museum Studies* 13, no. 1 (1987): 22. Though there has been some debate regarding *Métal’s* publication date, the current consensus among scholars is that the Librarie des Arts Décoratifs published the portfolio in 1928 with an introduction by Florent Fels. It was then first advertised internationally in *Variétés* in 1929. For a description of the type of venue that would have screened *De Brug*, see Malte Hagener, *Moving Forward, Looking Back: the European Avant-Garde and the Invention of Film Culture, 1919-1939* (Amsterdam: Amsterdam University Press, 2007), 95-105. The “peak” popularity of film societies in Europe was between 1928 and 1931. In France, for example, the short-lived *Les amis de Spartacus* acquired between 8,000 and 80,000 members between March and November 1928 and concentrated upon screening censored Soviet films.

² Sichel, *Photographer of Modernity*, 69-70. Sichel discusses Krull and Ivens’ romance, their gradual migrations to Paris, and 1927 *mariage blanc* in greater detail than is warranted for this study.
Krull by the savviness that led her to make both experimental and commercially viable photographs. More extensive accounts of Krull’s interwar career, such as Petra Löffler’s “Picturing the Metropolis: Paris in the Eye of the Camera,” often utilize Métal as a typical example of the photographer’s work to contextualize her within a Parisian milieu by comparing the portfolio to writings and images produced by her colleagues and friends in the City of Lights. Métal’s publication functions as turning point in every rehashing of Krull’s late-1920s biography that I have encountered. These narratives culminate in a similar fashion: Krull gains critical acclaim for Métal’s radical reframing of the industrialized world, is quickly identified as one of the stars of the Parisian avant-garde scene, and receives a surge of commissions from fledgling French photo-magazines such as Vu.

In order to address the filmic aesthetics that inform Métal’s construction and conjoin the portfolio with De Brug, we should instead look away from France and specifically to the Soviet montage theories of Sergei Eisenstein and Vsevolod Pudovkin, which Krull and Ivens first encountered through their

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5 Recently, scholars have begun to acknowledge the presence of divergent politicized discourses embedded within Krull’s imagery but have, again, focused upon the photographer’s activities during her time in France. Krull’s abstracted industrial subject matter may be seen as expressive of opposing political and economic theories—fascism, capitalism, communism, and anarchism—as in studies by Mark Antliff, “Machine Primitives: Philippe Lamour and the Fascist Cult of Youth,” in Avant-Garde Fascism: the Mobilization of Myth, Art, and Culture in France, 1909-1939 (Durham, NC: Duke University Press, 2007), 155-201; and Kristen Oehlrich “Images of Industry in the Twenties: Photography, Film, and Political Ideology,” in The Image of Technology, ed. Will Wright and Steven Kaplan (Pueblo, CO: Society for the Interdisciplinary Study of Social Imagery, Colorado State University-Pueblo, 2009), 246-52. Antliff describes images that Krull published in Philippe Lamour’s Grand’Route in 1930 as celebrations of Lamour’s “fascist doctrine of l’art mécanique.” Emphasizing the elasticity of the photographs’ political content, Oehlrich also expands Antliff’s analysis by comparing the slightly later Grand’Route images to the Métal series and to Walter Benjamin’s writing on Krull’s work.
involvement with the Dutch avant-garde before immigrating to Paris. Both photographer and filmmaker were engaged in the conversations that have come to shape our understanding of filmic montage during this era, yet, with the exception of Kim Sichel’s monograph *Germaine Krull: Photographer of Modernity*, no study of Krull’s work has remarked upon the filmic aspect of the *Métal* portfolio. It was in fact Sichel’s compelling distinction between the two montage methods that Krull and Ivens utilize to construct their works that solidified my conviction of the projects’ codependency after my initial investigation of the filmic correspondences between *Métal* and *De Brug*. Sichel’s identification of Eisenstein’s “montage as collision” at work in Krull’s portfolio and Pudovkin’s “montage as linkage” evident in Ivens’ film provides a framework for elucidating the subtly differentiated filmic juxtapositions that form a visible dialogue between *Métal* and *De Brug*.\(^6\)

Eisenstein and Pudovkin’s theories of filmic montage are indeed necessary for understanding not only the aesthetic connection between *Métal* and *De Brug* but also each project’s capacity to convey political meaning to Krull and Ivens’ contemporaries in the 1920s. Although their projects each constructed discriminable fusions of man and machine through juxtaposed fragments, Krull and Ivens’ shared industrialized subject matter would have most immediately elucidated subtle differences between their montage aesthetics—not their politics—to the relatively select audience for avant-garde work in interwar Paris. On one hand, the collection of fragmented views in Krull’s *Métal* portfolio

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\(^6\) Sichel, *Photographer of Modernity*, 75.
activated individual observers to find meaning in an imagined continuation of the movement or context suggested in each photograph, to create their own filmic montages by becoming the mechanism that produced cohesion in the photographer’s work. Conversely, Ivens’ direction of viewers’ attention to the intricacies of De Brug’s structure through a montaged sequence of forms encouraged his audience to receive the symbiosis between themselves and the structures on screen in a more passive manner. Yet despite the differing conceptions of modernization that their visual tactics suggest, Krull’s and Ivens’ related montage methods were more likely a distraction that constantly drew the observer’s attention to each project’s filmic properties. This formal pull toward the surface obscured the sociopolitical implications that distinguished Krull’s anarchist interrogation from Ivens’ communist cohesion. As I will argue, the filmic juxtapositions visible in Métal and De Brug thus constituted the projects’ aesthetic accessibility for interwar viewers and, at the same time, lessened the projects’ political legibility. The visible connections between Métal and De Brug therefore highlight one way in which Krull’s and Ivens’ tempering of photographic abstraction through filmic montage, suggestive of a hybridization frequently apparent in interwar avant-garde productions, might have done more to reaffirm their projects’ status as art objects than to project their politics.\(^7\)

\(^7\) The Bauhaus’s production of utilitarian objects represents one attempt to eliminate the bourgeois distinction between artistic and quotidian implements. However, the fact that many of these designs are still of interest based upon their aesthetic properties demonstrates that the fusion of interior design and architecture in Bauhaus productions, for example, did not result in the negation of institutionalized art. Also see Peter Bürger, *Theory of the Avant-Garde*, trans. Michael Shaw (Minneapolis: University of Minnesota Press, 1984) for a discussion of the failure of Dadaism to fully negate the art object through the creation of ephemeral projects that combined found materials and performance.
It is important to acknowledge that Krull and Ivens completed *Métal* and *De Brug* relatively early in their careers—before the photographer’s images appeared with frequency in illustrated news magazines and the filmmaker went on to make narrative documentaries that reflected his strengthened connection with organized communism. However, *Métal* and *De Brug* should not be read merely as foreshadowing later, more shocking and violent images of human bodies at war or, in Krull’s case, as precursors to her commercial photographs of the 1930s or work for the French Resistance in the 1940s. True, these two projects depend in part upon support from industrial ventures that many of Krull and Ivens’ peers would have rejected as bourgeois. Some of Krull’s *Métal* images— for example, an image of spinning gears (Fig. 3)— could be outtakes from early commercial commissions, and Ivens could not have made his early experimental films without assistance from his family’s company. Still, if we draw not only from visual similarities but also from the impact of their contemporaries’ attention and cognition upon the reception of these projects in the late-1920s, the ambiguities that *Métal* and *De Brug*’s hybrid forms generate do not merely suggest timid early attempts in aesthetic experimentation. Through *Métal* and *De Brug*, Krull and Ivens align themselves with two of the most aggressive visual vocabularies of the 1920s: the New Vision and Soviet filmic montage, whose advocates sought not just to revolutionize artistic practice but to transform the modern subject’s position in the world. Acknowledging the tenacity of Krull’s and Ivens’ desire to meld

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8 See Sichel, *Photographer of Modernity*, 41, 81; and Hagener, *Moving Forward*, 46. Sichel notes Krull’s commissions from Citroën and Peugeot, and both she and Hagener comment on Ivens’ dependence upon the technical equipment provided by his father’s photo supply company, Capi.
human and machine through their projects is essential to understanding the radicalism of this work and connects *Métal* and *De Brug* to a much larger avant-garde aspiration to renegotiate the relationship between artistic production and modern life.
Figure 1
Germaine Krull, *Pont Suspendu de Rotterdam*, 1926.
Gelatin silver print. 21.4 x 14.6 cm.
Musée National d'Art Moderne, Paris. Published in *Métal* (Plate 46), 1928.
Figure 2
Joris Ivens, Film Still #1 from *De Brug*, 1928.
14 minutes. Silent B/W 35 mm.
Figure 3
Germaine Krull, Untitled (*Métal*, Plate 47), 1928.
Collotype. 23.5 x 17.1 cm.
Germaine Krull Nachlass, Museum Folkwang, Essen.
CHAPTER 2

APPROACH TO MATERIALS: i10 AND FILMLIGA

A look at Krull and Ivens’ meeting and their formative years amidst avant-garde circles outside of France provides evidence of heated political and artistic debates and helps to envision the milieu in which the two conceived and executed Métal and De Brug. The photographer and the filmmaker first met in Berlin. Krull’s earlier participation in activist circles in Bavaria led to her expulsion from the state and a year in the Soviet Union from January 1921 to January 1922. The events of that year, including her attendance at the Third World Congress of the Communist International, an arrest, near execution, and subsequent expulsion from Russia, caused Krull’s renunciation of organized communism in favor of anarchism and move to Berlin in 1922.9 Ivens, who was to inherit his family’s photography business in the Netherlands, had come to Berlin in order to continue his manufacturing studies. However, after reconnecting in 1921 with Arthur Lehning, an anarchist writer he met while they were students in Rotterdam, Ivens soon became a part of the radicalized Berlin cultural scene where he deepened his understanding of communism and formed both a creative and a romantic partnership with Krull.10 During an intense photographic collaboration with Ivens from 1923 to 1927, Krull published work in several Dutch

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9 See Sichel, Photographer of Modernity, 17-43; for an extended narrative.
journals, including Lehning’s *i10: Internationale Revue*.\(^{11}\) Krull was also engaged by Soviet cinematic avant-garde discourse through Eisenstein’s newly available montage theories, and she published in the journal *Filmliga*, which Ivens founded with several collaborators from the film society of the same name in response to the Dutch government’s censorship of Pudovkin’s film *Mother*. *i10* and *Filmliga* each featured a heterogeneous mixture of content, integrating aesthetic conversations into broader discussions of the modern condition.

Ivens later cited Lehning’s anarchist leanings and interest in the politics of cultural production as the impetus for his own activism, and these shaped the inclusiveness of *i10*’s twenty-two issues, published between 1927 and 1929.\(^{12}\) Ivens and Lehning had initially planned to create a publication similar to Franz Pfemfert’s German political and literary journal *Die Aktion* before each became involved with their respective revues. Krull and Ivens did each publish visual content in *i10*; a 1928 image of *De Hef* (Fig. 4) is credited to both Krull and Ivens in the thirteenth issue of the revue.\(^{13}\) Ostensibly a photograph Krull made alongside Ivens as he filmed, the image represents an overt connection between *i10*’s content and the conjoined projects *Métal* and *De Brug*.

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\(^{12}\) Van Helmond, “Politique et culture,” 17. Van Helmond explains that during their years as schoolmates Lehning and Ivens were both still formulating the political stances that would later shape their work, describing their early interactions as follows: “C’est peut-être pour cette raison que Joris Ivens se réfère à lui dans ses mémoires comme ‘un étudiant plus engage que je ne l’étais dans la réalité sociale…qui commença à m’ouvrir les yeux…’ Pourtant, Lehning n’était pas encore l’ ‘anarchist convaincu’ qu’il deviendra plus tard.”

\(^{13}\) See Bool, “Photographie et typographie,” 45. Also, Sichel, *Photographer of Modernity*, 315; in note 31, Sichel suggests that the stills from *De Brug* are actually uncredited photographs by Krull. However, a digitized version of *Internationale Revue i10 1927-1929*, ed. Arthur Lehning, (Nendeln: Kraus Reprint, 1979), http://www.dbnl.org/tekst/_int001inte01_01/_int001inte01_01_0121.php; credits an image to both Krull and Ivens.

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Krull’s photograph of *De Brug* appeared in *i10*’s thirteenth issue alongside texts by Ludwig Grote on Kandinsky’s conception of theatre and by E.J. Gumbel on statistics and class struggle, among others.\(^{14}\) The image thus contributed to the spirited discourse that formed the revue’s diverse content, which the photographer and the filmmaker would have read as subscribers.\(^{15}\) Lehning describes *i10*’s purpose in the introduction to the revue’s first issue:

> As this monthly asserts no dogmatic tendencies nor represents any party neither any group, the contents will not always have a complete homogenous charakter [sic] and will be mostly more informative than following at one line of thought. Its idea is to give a general view of the renewal of which is now accomplishing itself in culture and it is open, international, for all wherein it is expressed.\(^{16}\)

According to this bold statement, Lehning envisioned *i10* as a forum in which artists and intellectuals could both assert and have a chance to respond to conflicting opinions, which subscribers could read as a means to inform but not delineate their own conceptions of interwar European culture and politics.

However, Lehning’s conflation of aesthetic and political content in his publication was itself a statement of the editor’s position. To be sure, his inclusion of visual and textual manifestos by Piet Mondrian, J.J.P. Oud, Walter Benjamin, and László Moholy-Nagy, among others, reveals that Lehning valued the political potential of images.

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\(^{14}\) For access to *i10*, no. 13 (1928) beginning with Lehning’s editors note, see Lehning, *Internationale Revue i10*, http://www.dbnl.org/tekst/_int001inte01_01/_int001inte01_01_0118.php


Moholy-Nagy played a particularly influential role in shaping *i10*’s visual content. Having recently introduced his New Vision, a theory which upheld photography and film as the primary sources of information in the modern world, Moholy-Nagy can be found defending this method of perception in the revue. The typophotographic arrangements of image and text in the pages of *i10* indeed resemble Moholy-Nagy’s design for his 1927 publication, the second German edition of *Painting, Photography, Film (PPF)*, which cultural critic Menno ter Braak reviewed in the thirteenth issue of *i10*.\(^\text{17}\) Comparing several pages from this thirteenth issue of the revue (Fig. 5) and excerpts from *PPF* (Fig. 6), Moholy-Nagy’s utilization of blank space to create dynamic relationships between text and image in both publications is evident. The play between typographic, photographic, and schematic forms on the page transformed reading into an act of visual perception, displaying Moholy-Nagy’s emphasis upon the New Vision as the only viable method to acquire knowledge in the midst of the ever-present inundation of images that presented themselves to modern observers.

Due to the radicalism of his new visual language, Moholy-Nagy also felt obligated to underscore the New Vision’s potential through theoretical and didactic texts designed to help readers recognize the potential capabilities of photography and film. Among these texts, the first section of *PPF* contains a series of short passages that convey ideas that he later presented in *i10* in essays such as “Unprecedented Photography,” which appeared in the revue’s

\(^\text{17}\) See digitized reprint Lehning, *Internationale Revue i10*, http://www.dbnl.org/tekst/_int001inte01_01/_int001inte01_01_0126.php; for ter Braak’s review of László Moholy-Nagy’s *Malerei, Photographie, Film*. This book was originally published in German through the Bauhaus.
first issue in 1927.\textsuperscript{18} Moholy-Nagy promotes an extension of artistic vision through new technologies that allow observers access to imagery that transgresses the limits of human vision and traditional art forms such as painting. For example, in his essay “On the Objective and the Non-Objective,” Moholy-Nagy contends:

[…] that painterly methods of representation suggestive merely of past times and past ideologies shall disappear and their place be taken by \textit{mechanical means of representation} and their as yet unpredictable \textit{possibilities of extension}. In such a situation the discussion about objective and non-objective \textit{painting} will cease to be important; the whole problem will have to be comprised in \textit{absolute} and (not ‘or’ but \textit{and}) \textit{representational} optical \textit{creation}.\textsuperscript{19}

This statement conveys Moholy-Nagy’s renunciation of both mimetic and abstract painting as irrelevant methods of expression due their fixity and dependency upon past models for coherence. He preferred modern mechanics that enable infinitely reproducible photographs and films to present the observer with a \textit{flux} of optical information that becomes intelligible in an \textit{instantaneous} act of perception which is unique to each individual viewing experience.

The play between duration and simultaneity that one must negotiate in accessing New Vision photography suggests the intricacies of this process; Moholy-Nagy in fact emphasized the need for practice in observing new photographic and filmic forms. To this end, Moholy-Nagy organized the second section of \textit{PPF} thusly: “I have placed the illustrative material separately following


the text because continuity in the illustrations will make the problems raised in the 
text VISUALLY clear."\textsuperscript{20} The observer experiences these illustrations, 
supplemented by Moholy-Nagy’s brief textual instructions, by flipping through the 
book’s pages—in short, through movement and thus time. In eliciting their 
participation, Moholy-Nagy guides observers to create manual photographic 
montages not unlike projected filmic montages.\textsuperscript{21} 

Ivens published a series of stills from \textit{De Brug} in \textit{Filmliga} in 1929, 
accompanied by arrows to illustrate the camera’s motion (Fig. 7), which suggests 
that members of his Dutch film society were equally interested in the dynamic 
perceptual processes that Moholy-Nagy describes in \textit{PPF}.\textsuperscript{22} This printed 
manifestation of Ivens’ film not only betrays formal connections between 
Filmliga’s emphasis upon filmic abstraction and the mechanically-morphed 
shapes that appear frequently in New Vision photography, but also suggests the 
film society’s pedagogical focus. \textit{Filmliga}, issued from 1927 to 1931, contained 
articles and reviews designed to further facilitate in print the discussions held 
before and after the group’s screenings.

Among the most ideologically united groups of alternative film enthusiasts 
in the 1920s, Filmliga first emerged as a forum in which to view and discuss films

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\item \textsuperscript{20} Moholy-Nagy, \textit{Painting, Photography, Film}, 47. Capitalization in original.
\item \textsuperscript{22} See Jan Heijs, \textit{Filmliga: 1927-1931} (Nijmegen: Socialistische Uitgeverij Nijmegen, 1982), http://www.dbnl.org/tekst/_fil001film01_01/_fil001film01_01_0186.php; for a digitized reproduction. Also see Moholy-Nagy, \textit{Painting, Photography, Film}, 122-137; for Moholy-Nagy’s “typophoto” “sketch” for the unrealized film \textit{Dynamic of the Metropolis}.
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that were not allowed into commercial cinemas in the Netherlands.\textsuperscript{23} Ivens' cofounders included writers such as ter Braak, who published in the more diverse \textit{i10} revue but also strongly influenced \textit{Filmliga}'s didactic approach. As a group, they worked to define the aesthetics of filmic production through screenings during which they would compare the predominantly abstract avant-garde films that they admired to excerpts from commercial cinema.\textsuperscript{24} Filmliga's manifesto, printed in the first issue of the journal and signed by Ivens, presents this oppositional model, defining the aesthetic value of a select number of effective productions through their contrast to more pervasive studio projects as follows: “Once in a hundred times we see: the film. For the rest we see: cinema.” Cinema in the text is associated with “kitsch, Hollywood, formulaic filmmaking, and sentimentalism whereas film pointed towards the discourse around medium specificity.”\textsuperscript{25} With articles printed in Dutch as well as German, French, and English, \textit{Filmliga} aimed for an international audience, but unlike the equally cosmopolitan \textit{i10}, the film society’s journal was a vehicle for an aggressive agenda.\textsuperscript{26}

Filmliga’s tendency to promote visually abstract films over mimetic films represents more than a championing of film over commercial cinema. As Tom

\textsuperscript{23} According to Hagener, \textit{Moving Forward}, 84-5; the relationship between commercial cinema and avant-garde film was a complicated manner. Censorship boards did often ban radical films, but some avant-garde filmmakers screened their work in alternative spaces because commercial theatres were uninterested in showing them.


\textsuperscript{25} Hagener, \textit{Moving Forward}, 50. Also see Heijs, \textit{Filmliga}, http://www.dbnl.org/tekst/_fil001film01_01/_fil001film01_01_0004.php; for a full version of the manifesto in Dutch.

\textsuperscript{26} Hagener, \textit{Moving Forward}, 124. Hagener lists \textit{Filmliga} among a number of small avant-garde film publications.
Gunning describes, nonmimetic films also call spectators to renegotiate the relationship between themselves and the film medium. In short, the abandonment of linear narrative allows for a viewing experience that activates the spectator’s senses rather than deadening them through immersion. Filmliga’s statements and screening selections – such as films by J.C. Mol that abstract the world through a microscopic lens – regularly emphasized the rigorous cognitive act of translating film’s mechanical vision into knowledge. The idea that mechanically produced imagery should be valued not because it replicates human vision but because it allows us to conceive of a world beyond our own biological capabilities certainly recalls Moholy-Nagy’s conception of the New Vision. Moreover, Filmliga’s emphasis upon viewing as an act of cognition evokes the heated debates regarding the function of filmic montage throughout the 1920s. The ferocity of this discourse seems to have been strongest amongst Soviet filmmakers and, consequently, montage’s most refined theorization first appeared in Russian and became available to Western Europe through publications like Filmliga. Krull and Ivens encountered this debate on Filmliga’s pages and also even more directly through contact with Eisenstein and Pudovkin, who each traveled to Western Europe on several occasions between 1926 and 1927.

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27 This passage is from a Dutch text about Filmliga by Tom Gunning, “Ontmoetingen in verduisterde ruimten. De alternatieve programmering van de Nederlandsche Filmliga,” in Het gaat om de film! Een nieuwe geschiedenis van de Nederlandsche Filmliga 1927-1933 (Amsterdam: Bas Lubberhuizen; Filmmuseum, 1999), 252; quoted in translation by Hagener, Moving Forward, 56.

28 Hagener, Moving Forward, 54-7. Hagener notes that Mol’s films appeared “in several programs of the Filmliga for their qualities as ‘absolute films,’” a term that originally described a group of films by Hans Richter, Viking Eggeling, Walter Ruttmann, René Clair, Fernand Léger and Dudley Murphy, shown on May 3rd and 10th, 1925 in Berlin, that later evolved to describe a variety of abstract, predominantly German films.

29 Ibid., 57.
1932. In April 1928, *Filmliga* published Krull’s photographic portrait of Eisenstein, and both Soviet filmmakers were invited to the group’s screenings.30

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30 For detailed descriptions of these trips, see Hagener, *Moving Forward*, 187-91. Ivens also stayed with Eisenstein when he visited the Soviet Union. Also, see Sichel, *Photographer of Modernity*, 315. In note 40, Sichel mentions this portrait and describes “[Krull’s] cover to the journal depicting a closely cropped view of a filmmaker’s hands holding a strip of film over a splicing machine,” which appeared in February 1929.
Figure 4

“PHOTO GERMAINE KRULL; ‘DE BRUG’ JORIS IVENS”
Figure 5
From *i10 Internationale Revue*, no. 13 (1928), cover and two page layouts.
Figure 6
Figure 7
From A. Boeken, “Bij een fragment van ‘De brug’ van Joris Ivens,” *Filmliga* 2, no. 5 (February 1929), 60.
CHAPTER 3

MONTAGE METHODS: COLLISION V. LINKAGE

Eisenstein and Pudovkin seem to have been friends as well as adversaries, mingling their personal lives with their work as did Krull and Ivens. A passage from Eisenstein’s 1929 essay “The Cinematographic Principle and the Ideogram” provides a relevant glimpse of the filmmakers’ relationship: he writes,

In front of me lies a crumpled sheet of paper. On it is a mysterious note: ‘Linkage-P’ and ‘Collision-E.’ This is a substantial trace of a heated bout on the subject of montage between P (Pudovkin) and E (myself). This has become a habit. At regular intervals he visits me late at night and behind closed doors we wrangle over matters of principle.31

Eisenstein’s description of Pudovkin’s theory is embedded within a text in which he explains the genesis of his conception of montage through several examples from earlier, non-Western visual culture. We can see, therefore, that he values Pudovkin’s insights although they directly oppose his own theories. Both filmmakers depended upon one another to create a dialectic that gives full expression to new montage methods, just as Krull and Ivens’ close relationship facilitated their creation of codependent projects.

As with Métal and De Brug, I will first point to the similarities between

Eisenstein and Pudovkin’s theories, which they developed concurrently through

31 Sergei Eisenstein, “The Cinematographic Principle and the Ideogram,” in Film Form: Essays in Film Theory, ed. and trans. Jay Leyda (New York: Harcourt, Inc., 1949), 37; first appeared in Russian as an afterward to N. Kaufman’s Yaponskoye kino, published in Moscow in 1929. Both Eisenstein and Pudovkin published in Russian, though many of their texts were quickly translated into other languages. The word for montage in Russian, “montazh,” seems to suggest a process of assemblage in a manner to its equivalent to the term “montage.”
writing and filmmaking. Each filmmaker described montage as the fundamental characteristic of film form—the process that both enabled cinema to define itself as a mode of production and allowed individual films to gain intelligibility. With equally deliberate language, both attempted to argue for the importance of the editing process and to describe the characteristics of successful montage constructions, often through examinations of contemporary films. For example, in his 1925 essay “Photogeny,” Pudovkin defines montage in the following manner: “The montage construction of a film, which is the basic characteristic method of making an impression in the cinema art, depends on the maximum clarity of each element that constitutes the film.” He continues by listing several types of subject matter that augment filmic clarity, such as “The city, city streets (especially Western ones), railway bridges, locomotives, motor cars, machines, and so on.”

Similarly, Eisenstein writes in his 1929 essay “A Dialectic Approach to Film Form”:

Shot and montage are the basic elements of cinema. 

*Montage*

has been established by the Soviet film as the nerve of cinema.

Eisenstein develops such bold, generalizing statements through lists of montage types illustrated with stills and film sequences, including examples from his films *Battleship Potemkin* (1925) and *October* (1927, Fig. 8).

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34 Ibid., 45-63.
Pudovkin’s texts are therefore equally didactic in their presentation of specific examples to convey abstract concepts.

The similar tone and format of these two essays suggest Pudovkin and Eisenstein’s shared convictions; however, the connotations of two phrases among Eisenstein and Pudovkin’s definitions also hint at the filmmakers’ oppositional conceptions of montage’s proper function. First, Pudovkin’s identification of “linkage” as the defining feature of film form illuminates his insistence upon the need for “clarity” in montage elements that combine to create an expressive, cohesive whole. According to Pudovkin, this linkage is perceptible to the viewer only if the filmmaker is able to organize the disjointed film stills he has exposed during the shoot into “a clearly perceptible rhythm, expressed in the alternation between changing individual fragments. [...] that excludes chaos and chance.”

Implicit in Pudovkin’s insistence upon the use of montage rhythm to create clarity in film is the location of cinematic content in the visible form of the film. In other words, patterns in the filmmaker’s sequencing of stills should guide the viewer from one frame to the next, the spaces between stills acting as downbeats in a melody that are not empty but anticipate the next note. Pudovkin thus envisions cinema audiences as groups of spectators who passively receive the filmmaker’s message through their perception of carefully choreographed movements.

In contrast, Eisenstein’s equation of the word “nerve” with “shot and montage” in “A Dialectic Approach to Film Form” suggests that his conception of

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montage is not linked directly to the filmmaker’s visible construction but to
viewers’ intuitive mental responses to the collision between the juxtaposed
images of a montage sequence.\textsuperscript{36} For Eisenstein, who contends that not only film
but all “art is always conflict,” cinema audiences are ultimately responsible for
creating content during screenings; their emotional reactions make meaning from
the images that the filmmaker arranged in the editing process.\textsuperscript{37} Different from
Pudovkin’s visual linkage, Eisenstein’s montage is “an idea that arises from the
collision of independent shots—shots even opposite to one another”; it is not a
stable form.\textsuperscript{38}

In her portfolio, Krull’s montage construction manifests itself through overt
discrepancies between her images. Adhering quite literally to her title, the
photographer focuses upon metallic subject matter in each of \textit{Métal}’s sixty-four
photographic plates, but the project’s content rests equally in the inconsistencies
between—or independence of—each individual image. For example, the focus
upon surface and verticality in the previously examined photograph of the
hefbrug shifts in another image of a more distant industrial structure pictured in a
more visible environment (Fig. 9). Here, Krull’s lens captures the angular
hatching of the structure’s struts from what seems an impossible viewpoint; she
hovers at a distance from her subject rather than planting her feet upon its
structure. This spatial remove, along with her rendering of the form as a
blackened silhouette descending toward muddy train tracks below, at first

\textsuperscript{36} Eisenstein, “A Dialectic Approach to Film Form,” 48. Emphasis in original.
\textsuperscript{37} Ibid., 46.
\textsuperscript{38} Ibid., 47-49. Also quoted in Sichel, \textit{Photographer of Modernity}, 78. In fact, Eisenstein does, not unlike
Pudovkin, discuss the function of rhythm in his montage of collision, but only as a means to enhance the
viewer’s sense of “tension,” not as a stabilizing, continuous force.
conveys a seemingly more complete view of the structure. However, as in her close view of the bridge’s backbone, Krull severs the body of this beast too so that the viewer must imagine the full breadth of its anatomy. Does it have a head? If so, is its face in the photograph, looking away? How many straight, unbending legs exist outside of Krull’s frame? A consideration of the Métal photographs as a set, indeed, does not lead the viewer to conclusions but elicits still more unanswerable questions.

Krull also includes a number of photographs of gleaming metallic surfaces illuminated by bright indoor lighting in the Métal portfolio. As with the exterior shots mentioned above, an interior image of tentacle pipes that descend from some unseen body out of frame elicits a similar series of questions about wholeness and fragmentation (Fig. 10). Métal’s photograph of six gears (Fig. 11), on the other hand, shows several different shapes of the toothed components arranged symmetrically so that their full forms are on display. This photograph is among a number of similarly anatomical images of machine parts shaped like hearts or other human organs that are seen outside their use context and presented like specimens in biological or botanical reference guides. Accordingly, in addition to asking us to imagine the subjects of her photographs as fragments that we must complete through linear continuation—what I might call dynamic fragmentation—Krull also provides us with photographs of visual information that seem to be contained within its frame but simultaneously signifies a fragmentary status—as in a fixed fragmentation.
Krull further develops these two types of fragmentation found in her *Métal* photographs by including a limited number of multiple exposure images. In two similarly composed examples, Krull overlaps a bicycle wheel or other circular forms several times within a single frame in a manner reminiscent of the chronophotography of Étienne-Jules Marey (Fig. 12). Upon initial inspection, the superimposed wheels seem to record the movement of a singular entity. However, unlike Marey’s positivist studies, Krull’ image does not depict a single action that one might observe in daily life. Rather, the constant spinning motion that the overlapping circular forms first suggest breaks into shards when we realize that Krull has used multiple wheels to produce the effect. What we first imagined as continuous space over time is really discrete fragments of space and time joined only through our observation. Here, as in her more static images of metal bodies that only become complete through cognition, Krull provided her contemporaries with a fragmented subject whose function did not exist until they imagined it. These wheels spun solely in their minds as they do in ours, put into motion through an act of perception and not in actuality.

Further contributing to *Métal*’s emphatically fragmentary images is Krull’s decision to leave them unbound: an invitation to collaborate by combining her photographs into our own individualized montages as we physically handle each print. One could certainly flip through the numbered images one by one in a sequential fashion, in a manner similar to reading Moholy-Nagy’s *PPF*. Yet Krull’s repetition of certain motifs—like silhouetted struts and surface sheens—and the
portfolio’s recurrent compositions—from a lens pointed toward the sky to one focused so narrowly that depth disappears—encourages a desire to compare. Persuading interwar observers to arrange and rearrange the unbound pages of the portfolio across the expanse of a large table, Krull provoked individual viewers to act as montage editors and to imagine her photographs in their own filmic sequences.

And so, while I would argue that the photographer’s surrender of control to the observer constitutes Métal’s filmic component, the participatory aspect of the portfolio’s reception also prevents Krull’s project from functioning exactly as films do. For both Eisenstein and Pudovkin, the placement of each shot within a montage sequence must originate from decisions made by the filmmaker. Both emphasize the need for the filmmaker’s preconception of individual shots in order to create a film that can be understood as an organic whole. Krull split this act of filmmaking in two—dividing the conception of Métal’s montage between herself and individual observers—so that her project could not possibly exist as an integrated whole. She instead offered her contemporaries an opportunity to participate in creating collisions between images that were potentially even more sensually, emotionally, and intellectually impactful than Eisenstein’s in that beholders could both create and perceive the surprising juxtapositions.

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39 See Eisenstein, “Cinematographic Principle,” 37; and Vsevolod Pudovkin, “The Film Director and Film Material,” in Selected Essays, ed. Richard Taylor, trans. Richard Taylor and Evgeni Filippov (New York: Seagull Books, 2006), 77. Both filmmakers write specifically about the importance of preconception. Eisenstein contends that “The shot is a montage cell,” and is therefore conceived in such a way that it will fit into a closed, organic body. Pudovkin speaks in even more detail about the process of integration, writing “When a film is being shot, it is already being conceived as a montage sequence of separate pieces of film. [...] that a link is established between the pieces and their organic coherence on the screen has an impact.”
Conversely, Ivens’ *De Brug* is a closed construction, projecting the filmmaker’s conception of mechanized life in a composed sequence. Ivens identifies his subject and asserts his control of the film in its first frames: we see a drawn diagram of the bridge (Fig. 13), followed by a distant shot of the structure spanning water with a low cityscape forming the horizon line (Fig. 14), and then the filmmaker himself, turning his head and handheld camera toward the spectator (Fig. 15). Ivens, it seems, has merged with the mechanism of his camera. *De Brug*’s narrative resembles a common documentary sequence by describing a day-in-the-life of the metal structure. Ivens begins by concentrating upon the characteristics of the bridge and its environment—its height, its urban surrounding, its relationship with the trains that move across it—and then he focuses more precisely upon the bridge’s primary function—raising and lowering to accommodate ships on the river. In his depiction of the fundamental components of the bridge’s existence, Ivens also links several shots whose portrayal of physical contact between man and machine, as in a sequence that depicts a hand pulling a lever (Fig. 16), suggest symbiosis between human bodies and mechanical implements. I suggest that this codependency between man and machine mirrors the interaction between observer and industrial subject matter that constituted viewers’ experiences of both *Métal* and *De Brug*.

Ivens’ use of montage as linkage in *De Brug* therefore served two purposes: First, the filmmaker’s linkage of fragments of the bridge’s structure allowed the viewer to reconstruct the plan shown in the first frames of the film,
recalling Pudovkin’s theory that montage should produce a standardized rhythm of form that drives the film’s movement. This internal rhythm made every movement in the sequence seem effortless; bridges, trains, and boats all seemed to float through the same unified space. Second, Ivens’ placement of human bodies—including his own seeing self—in this world linked the individuals in the film and, by proxy, the spectators in the audience to the consistent, idealized flow of the mechanized life on screen. In short, audiences became aware that the precision of the operations on screen and the film itself only exist through human action, including looking.

Certainly, the way in which Ivens composed each shot in De Brug further asserted his careful intervention in the audience’s experience. By drawing each viewer’s attention to the frame of vision itself, he emphasized the prescribed boundaries of each shot through a palpable steadiness of approach. Often, only one element moves within in the frame—for example, smoke or train wheels rolling across the bridge’s immobile structure. Or the camera might scan a diagonal shadow or strut in a way that mimics the motion of the eye as one examines a still photograph (Fig. 17). De Brug’s rhythm thus depends not only upon the repetition of the bridge’s form but also upon Ivens’ coordination of our minds and bodies as we become immersed in the sensory experience of viewing the film.

Ivens’ film projected a mental sequence, something that Krull’s portfolio of photographs forced viewers to invent for themselves. Krull’s disjointed fragments
of industrial implements—the raw materials of modernity severed from their utilitarian contexts—presented each beholder with a challenge to conceptualize modernization in the moment of perception through an individualized emotion: one could either feel empowered by a mastery of these objects or overpowered by their ubiquity. Yet, as works informed by Eisenstein and Pudovkin’s conflicting conceptions of montage construction, Métal and De Brug curiously demonstrated that collision and linkage could affect viewers similarly as these formal techniques presented themselves as content. Both projects attested to codependency between machine and human through montage structures that simultaneously provoked one to enact and to notice this relationship.

True, Ivens’ film choreographed the viewer’s experience and thus conveyed a mutually beneficial partnership between humanity and industry reminiscent of contemporary communist propaganda while the fact that Krull’s portfolio asked each viewer to choose a position suggested her anarchist tendencies. But it is still left for us to understand how the disparate locations of mechanized motion in Krull’s and Ivens’ imagery—the mind v. the screen—finally impacted their projects’ political potential.

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40. The fact that Krull and Ivens each encourage viewers to notice and also enjoy the process of looking in their encounters with Métal and De Brug of course calls to mind Tom Gunning’s theorization of a “cinema of attractions,” which he first published in “The Cinema of Attraction: Early Film, Its Spectator and the Avant-Garde,” Wide Angle (Fall 1986) and later revised in “The Cinema of Attractions: Early Film, Its Spectator and the Avant-Garde,” in Early Cinema: Space, Frame, Narrative, ed. Thomas Elsaesser and Adam Barker (London: British Film Institute, 1990), 56-62. However, although Ivens does encourage the viewer to notice his or her seeing-self in De Brug, through “exhibitionist confrontation” rather than “diegetic absorption,” the pleasurable experience of perceiving the bridge on screen aligns Ivens more with earlier filmmakers from the turn of the century than his interwar contemporaries, according to Gunning’s model. Moreover, Gunning’s identification of “direct stimulation” as a goal of filmmakers like Eisenstein further allies Krull’s work with the most radical motion picture techniques of her time.

41. See Sichel, Photographer of Modernity, 42. Sichel contends that Krull had no “serious” involvement in anarchism but mentions that Ivens later identified Krull as an anarchist.
Figure 8
Figure 9
Figure 10
Germaine Krull, Untitled (Métal, Plate 23), c.1925-1928.
Gelatin silver print. 22.3 x 15.9 cm.
Figure 11
Germaine Krull, *Untitled (Métal, Plate 16)*, 1928.
Collotype. 17.2 x 23.5 cm.
Germaine Krull Nachlass, Museum Folkwang, Essen.
Figure 12
Germaine Krull, Untitled (Métal, Plate 22), 1928.
Collotype. 23.2 x 17.1 cm.
Germaine Krull Nachlass, Museum Folkwang, Essen.
Figure 13
Joris Ivens, Film Still #2 from *De Brug*, 1928.
14 minutes. Silent B/W 35 mm.
Figure 14
Joris Ivens, Film Still #3 from *De Brug*, 1928.
14 minutes. Silent B/W 35 mm.
Figure 15
Joris Ivens, Film Still #4 from *De Brug*, 1928.
14 minutes. Silent B/W 35 mm.
Figure 16
Joris Ivens, Film Still #5 from *De Brug*, 1928.
14 minutes. Silent B/W 35 mm.
Figure 17
Joris Ivens, Film Still #6 from *De Brug*, 1928.
14 minutes. Silent B/W 35 mm.
CHAPTER FOUR
FACTURE AND (DYS)FUNCTION

In order to describe the political potential of Métal and De Brug more explicitly, I will now situate the two projects within a visual culture that extends beyond the 1920s European avant-garde community as well as Eisenstein and Pudovkin’s theories of filmic montage; Krull’s and Ivens’ projects also reflect Jonathan Crary’s broadly conceived, bipartite definition of attention in modern society. In his book Suspensions of Perception, Crary defines the modern observer’s capacity for attention as follows:

[...] attention is the means by which an individual observer can transcend those subjective limitations and make perception its own, and attention is at the same time a means by which a perceiver becomes open to control and annexation by external agencies.  

In an abridged application of this definition, Krull’s Métal photographs—as images physically placed in the beholder’s hands—seem only to facilitate the possessive attention that Crary identifies. For here the photographer implicated the interwar observer’s perception in the act of creation as each beholder arranged her stills to create an individualized montage. The observer would have thus seemed to utilize attention as a form of control in accessing Métal.

Conversely, in viewing a projection of Ivens’ De Brug, viewers were, to use Crary’s words, “open to control” as they passively watched the filmmaker’s

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already-complete montage. Yet if Crary’s explanation holds, and these two modes of attention consistently existed “at the same time,” a consideration of how observers simultaneously owned and were annexed by both Métal and De Brug is the key to understanding the politics of these works amidst the perceptual chaos of modern life.

Otherwise immersed in a world in which an overabundance of disparate visual stimuli had essentially blinded the masses, the contemporary audience would have encountered Métal and De Brug synchronically. Formal parity between the projects along with the distinct montage approaches of collision and linkage discussed previously thus allowed Krull and Ivens’ projects to fulfill Crary’s paradigm for combatting distraction. Put simply, montage allowed the projects to reference one another and their shared industrial subject in a way that concurrently activated and pacified the observer. The conflation of photographic and filmic language through montage in Métal and De Brug therefore engaged the observer in an act of translation.

Indeed, Krull’s and Ivens’ juxtapositions of industrial elements through montage replaced the narrative elements that commonly shaped photographic and filmic series, whether documentary news or a literary screenplay. On one hand, although Métal, divided into discrete photographs that require arrangement, depended upon the observer’s willingness to participate to shape its construction, Krull’s division of her portfolio’s images, which as I have shown essentially function as film stills, suggests her project’s dependence upon the
observer’s knowledge of sequential cinematic presentation for its intelligibility.
Likewise, in spite of the fact that Ivens’ images were pre-arranged for spectators, the stillness between cuts in Ivens’ film and several shots in which only one element on the screen moves in a continuous motion gave his film a fixed, photographic quality, which in turn allowed observers to process or suspend the images on screen for a longer period of time than the narrative-driven movement of most commercial cinema. In viewing Ivens’ film, observers had multiple opportunities to redirect their gaze across the screen in an act of engaged, aesthetic viewing not unlike the participatory perception involved in examining Krull’s portfolio. I have attempted to show the conflation of photographic and filmic language and the shared perceptual mechanics involved in observing Métal and De Brug and would further argue that the ambiguity in their use of each medium is integral to understanding both their creators’ intentions and the effectiveness of their radical calling of viewers to action.

Recalling that Moholy-Nagy contributed to Lehning’s i10, we can be sure the Krull and Ivens were aware of his New Vision approach to image-making in which the machine became not merely a prosthesis but a surrogate for the human eye. Here, Rosalind Krauss’s definition of the New Vision is apt, commingling the movement’s emphasis on the machine and the mental process of perception that I have stressed thus far. She writes,

Thus what unites the various techniques and formal tropes of The New Vision’s camera-seeing is the constant experience of the camera-seen. That is what lies beyond Moholy-Nagy’s rhetoric,
actually to enter the frame of the image as visual testimony to a technological apparatus that has usurped nature.\textsuperscript{43}

Krauss’s assertion that the success of the New Vision rested upon a coordination of machine vision and efficient cognition certainly recalls Moholy-Nagy’s instructions to readers in \textit{PPF} and, moreover, suggests both Ivens’ self-portrait as cyborg in the first minutes of \textit{De Brug} as well as a photographic self-portrait by Krull made during the time she was compiling images for \textit{Métal} (Fig. 18). Krull and Ivens each obscure their faces with their cameras in a merging of the mechanical and biological that references the process of perceiving their work.

Noting the alignment between the ideas that Moholy-Nagy presents in his concept of the New Vision and the hybrid forms and machine aesthetics found in \textit{Métal} and \textit{De Brug}, I contend that in drawing viewers’ attention to their own act of seeing, Krull and Ivens sought to interrogate the capabilities of human biology and, by proxy, systems of information—and of political control—based in the primacy of vision. Krull and Ivens’ projects, though, must be taken together to be read as fully articulated radical statements.\textsuperscript{44} The related montaged forms of \textit{Métal} and \textit{De Brug} enact the dynamic photo-filmic movement of Moholy-Nagy’s New Vision and, likewise, Eisenstein’s and Pudovkin’s precise characterizations of montage in a much more convincing way than Krull’s photographs could have ever conveyed when viewed as discrete images considered out of context.


\textsuperscript{44} Sichel, \textit{Photographer of Modernity}, 70-8. Sichel certainly treats this relationship in her book, but in a monograph about Krull understandably focuses more upon \textit{Métal} as a product of the photographer’s oeuvre than as a collaborative work.
Krull’s and Ivens’ projects fit together as two iterations of the same experiment that analyzes the capabilities of machines to translate the industrialized world for the organic beings they have usurped, reflecting an avant-garde spirit of investigation that shaped visual production in Europe and the Soviet Union throughout the 1920s. The radical potential of Métal and De Brug, again, lay not only in their formal aesthetics but also in the reaction that these visuals elicited from observers. Krull’s and Ivens’ depictions of metallic beasts recall Moholy-Nagy’s list of possible uses of the photograph to develop a modern understanding of a biocentric world, recently expanded to include inorganic forms of life in the midst of industrialization.\(^{45}\) Krull’s iron menagerie and Ivens’ conceptualization of the bridge also invoke film historian Malte Hagener’s description of Filmliga in the 1920s as a laboratory where filmmakers and cinephiles could freely engage in the exploration of broader ideas through the medium of film.\(^{46}\) Hagener further reminds us that only a few years after Métal and De Brug appeared, Walter Benjamin asserted the critical difference between discrete, static photographs and the movement of film in his “The Work of Art in the Age of Mechanical Reproduction” (1936), writing “To demonstrate the identity of the artistic and scientific uses of photography which heretofore usually were separated will be one of the revolutionary functions of the film.”\(^{47}\) The


\(^{46}\) Hagener, Moving Forward, 63-7.

\(^{47}\) Quoted in Ibid., 57. See also Walter Benjamin, “The Work of Art in the Age of Mechanical Reproduction,” in One-Way Street and Other Writings, trans. J.A. Underwood (New York: Penguin, 2009), 228-259; for Benjamin’s complete text.
combination of photographic and filmic properties in Métal and De Brug therefore seem to suggest a blending of the media, perhaps a hybrid form to reconcile transcendent beauty and utilitarian information, and thereby satisfied Benjamin’s desire.

Benjamin was another personal acquaintance encountered by Krull and Ivens during their migration to Paris. In his “Brief History of Photography” (1931), Benjamin indeed cited Krull’s “political” images, alongside August Sander’s “physiognomical” and Karl Blossfeldt’s “scientific” photography, among images that existed beyond art—works which, in his words, were not “handed over to fashion.”

The sentence that follows Benjamin’s praise of Krull’s work in “Brief History” places him in the New Vision camp in its overt criticism of Albert Renger-Patzsch, a proponent of the New Objectivity movement who debated Moholy-Nagy about the future of photography beginning in the mid-1920s. Benjamin

48 Walter Benjamin, “Brief History of Photography,” in One-Way Street and Other Writings, trans. J.A. Underwood (New York: Penguin, 2009), 189-90. As in “Work of Art,” Benjamin connects photography and film in this essay, writing, “A further stage in this clash between creative and constructive photography is marked by Russian film. It is no exaggeration to say that the great achievements of its directors were possible only in a country where photography proceeds not from stimulus and suggestion but from experiment and instruction.” Sichel, Photographer of Modernity, 73-4 and Oehlrich, “Images of Industry in the 1920s,” 248; also emphasize the importance of Benjamin’s reading of Krull’s work.

49 The two groups, which shared a base in Weimar Germany but also gained attention throughout Europe in the 1920s, often share space in discussions of the historical avant-garde and the history of photography. This conflation is unsurprising as many photographs from the New Vision and New Objectivity movements are visually indistinguishable. In fact, Moholy-Nagy even chose to include multiple images by Renger-Patzsch in PPF. Nevertheless, differences in Moholy-Nagy and Renger-Patzsch’s explanations of photography’s potential in their writing reveal their conflicting conceptions of the use value of photographic imagery. On one hand, Renger-Patzsch sought to enhance the capabilities of the human eye as a way to refocus observer’s attention upon the visible world. In essays such as “Aims” in Photography in the Modern Era: European Documents and Critical Writings, 1913-1940, ed. Christopher Phillips (New York: Metropolitan Museum of Art and Aperture, 1989), 104-5; Renger-Patzsch defines the photography of the New Objectivity as “the mechanical reproduction of form.” On the other hand, in Moholy-Nagy, “Unprecedented Photography,” 83-5; which appeared in i10 as well as in the same 1927 issue of Das Deutsche Lichtbild as Renger-Patzsch’s “Aims,” Moholy-Nagy stresses the need to define a “photographic language,” which would have “no dependence on traditional forms of representation! Photography has no need for that,” moving on to criticize comparisons between painting and photography and suggest methods to further purely photographic experimentation. The same visuals thus connote completely different meanings for Renger-Patzsch and Moholy-Nagy, the former attentive to their surface-level visibility, the latter attentive to the invisible knowledge they reference.
identified “The World Is Beautiful,” the title of a well-known photography book by Renger-Patitzsch published in 1928, as the “motto” of the fashionable art photography he detested. Thus, writing several years after Métal and De Brug made their first appearances, Benjamin reaffirmed the connection between Krull’s and Ivens’ constructive approaches and Moholy-Nagy’s desired functionality for the New Vision.

It is tempting to see Métal and De Brug through Benjamin’s text, for it substantiates their invocation of the social and political dynamism that characterizes New Vision imagery and Soviet filmic montage techniques. However, although Krull’s Métal images can only be experienced interactively – literally in the hands of the beholder and thus implying a call to action – the photographs’ dependence upon more codified, fixed filmic montage sequences to convey their content prevented them from becoming radical implements. For Métal and De Brug to function as political tools, their observers had to recognize broader applications of montage techniques. They would have had to make their contemporaries understand that the modern subject was, at all times, both the fabricator and the product of the visual excess of a machine age in which industrial material, or facture, was the only source of knowledge. Yet the projects’ dependence upon a shared metallic subject fixed the interwar observer’s attention specifically upon the relationship between Krull’s and Ivens’ works. This visual connection obscured the invisible montage techniques that applied.

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50 Benjamin, “Brief History,” 190. Also in Sichel Photographer of Modernity, 78-9; Sichel powerfully describes Benjamin’s hatred for Renger-Patitzsch’s approach to photography, writing that Benjamin viewed the New Objectivity as “the mere aping of the modern world.”
constructivist vision to the visual culture that viewers encountered in daily life as they flipped through magazines or walked past storefronts. Krull and Ivens’ projects illustrated this new way of looking for the observer in a manner that was engaging for their circle but not didactic.

Again, Krull’s retrospective identification of this moment in the 1920s as one in which photography became a “new movement of this era which touched all of art” as well as her and Ivens’ separate but concurrent movement toward social realism in their documentary work in the 1930s might seem to suggest that Métal and De Brug represent immature creative dabbling. But although the projects’ photographic and filmic abstractions did not project functional political messages to interwar observers, the portfolio and film are not simply representative of early forays into exclusively aesthetic concerns. They are also symptomatic of a much larger project of the avant-garde: to renegotiate the relationship between art and politics and to create a new visual rhetoric for the machine age.

To be sure, as Peter Bürger explained in 1974, avant-garde experiments in abstraction in this moment between the wars failed to effect widespread political change. Yet, this failure in execution should not prevent us from recognizing politicized intentions. The desire to transform the way in which individuals interacted with their rapidly shifting environment might be invisible to us, but it shaped visual abstraction and the suppression of mimesis during this

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era.\textsuperscript{52} In the end, the subtle connections between Krull’s and Ivens’ projects, verbal debates, and the impassioned texts printed in newspapers and journals in the interwar period demonstrate the over-simplicity of Bürger’s proclamation that the avant-garde’s radicalism only served to reify institutionalized art and its consequent relegation to the periphery. Among Bürger’s major conceits in \textit{Theory of the Avant-Garde} is that at the very least the interwar avant-garde, which included Krull, Ivens, Moholy-Nagy, Eisenstein, and Pudovkin, did change the art institution by eliminating “aesthetic norms” and creating a mode of criticism in which “functional analysis” is the only acceptable methodology.\textsuperscript{53} Does this idea not give the art institution itself political power? \textit{Métal} and \textit{De Brug} reflect an amalgamation of their avant-garde’s political and artistic language of change and therefore remain among Krull and Ivens’ most socially engaged projects.

\textsuperscript{52} Bürger, \textit{Theory of the Avant-Garde}, 57. Writing in the second half of the twentieth century, Bürger describes the fate of the avant-garde as follows: “...now that the attack of the historical avant-garde movements on art as an institution has failed, and art has not been integrated into the praxis of life, art as an institution continues to survive as something separate from the praxis of life.”

\textsuperscript{53} Ibid., 87.
Figure 18
Gelatin silver print. 20.5 x 15.1 cm.
Collection of Ann and Jürgen Wilde, Zülpich.
BIBLIOGRAPHY


