An Exploration of the Profession Based Structure of the Japanese Anime Industry via Patterns in Career Trajectories as Seen through Credits Information

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[1]
Hello, my name is Zoltan Kacsuk, and on behalf of my co-authors Bryan Hartzheim, Stevie Suan and Martin Roth i would like to welcome you to our presentation on the profession based structure of the Japanese anime industry captured through patterns in the career trajectories of credited creators.

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We will very briefly touch upon some key points regarding our methodology using available credits information from anime, then highlight the career progression of some well-known individual creators before focusing in on the exploded view of the profession based structure of the Japanese anime industry that our approach helps make visible.

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So, let’s dive right in!

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Two years ago at Mechademia we presented “The impossible quest for the complete list of all anime” highlighting the work undertaken by Haraguchi-sensei and the List Production Committee, the Media Arts Database, as well as the JVMG in trying to compile definitive lists of all anime (which is, of course, impossible, as already hinted at by that presentation’s title).
However, Haraguchi Perfect Data has always been about much more than just a list of all anime, it is an attempt to capture all credits information of said works as broadcast or screened in Japan. Such credits information are an amazing resource for anime research, and we are highly anticipating the integration of this data into the Media Arts Database and then the JVMG. In the meantime, in order to explore the potential avenues of research opened up by such credits data we are currently relying on the data aggregated on Anime News Network as a pilot study.
It is important to note that not everything is captured in credits information, as highlighted in the data collection and research undertaken at for example JAniCA, the Archive Center for Anime Studies at Niigata University, the WIJA project, and the work of researchers like Dario Lolli or Mathieu Mallard among others.

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What can we do with this credits information then?

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Here we see the careers mapped out of four well-known creators as they appear in the credits information. The x-axis shows the ordinal progression of their years of activity from their debut year marked by zero, and the y-axis enumerates the different types of roles for which they could've been credited. The heatmap colors on this grid indicate where they had and how many credits of a certain type at a given point in their career, with lighter colors indicating more credits. For example, we can see that Hayao Miyazaki's animation credits are concentrated in the first sixteen years of his career, and his later career is characterized by screenplay and directing credits, indicating a clear shift in the focus of his work. As interesting as these individual heatmaps may be, let's take a look at what type of analysis becomes possible once we change our focus from individual creators to all the credits information for all the creators in our data.

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In order to focus on the mature phase of anime production for which the available data is the most robust we analyze the period between 1980 and 2020. Also, to reduce the noise in the data we only explore roles that have at least one thousand mentions. Finally, in order to capture career progression, we look at role transitions between subsequent credit years for each creator. The image here displays the connections based on the top ten target roles (to which the transition from one year to the next moves) for each analyzed role.

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Let's explore this exploded view of the profession based structure of the Japanese anime industry in more detail!

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This network of roles and the role transitions connecting them was analyzed in Gephi to identify groups of roles that form modularity groups or clusters in other words. On this slide you can see the names we have assigned to these groups based on their defining roles and overall content. Starting from the top right corner and moving clockwise we have: editing, art/background, key animation/animation director, storyboard/directing, script/screenplay/original creator, theme song/music, sound, producer/production committee, publicity, production advancement, in-between animation, photography/compositing, 3D/CG, Color/Paint/Finish animation. Let's explore the structure of the graph and the different role groups in more detail!

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First, at the heart of this graph we have, what we could call the authorial core of anime production based on the scholarly as well as popular discourse around anime and their

creators. This is characterized by a strong interconnection between animation roles on the one hand and storyboard/directing and script/screenplay/original creator roles on the other hand. While the roles in the in-between animation group are usually not considered to be defining in the creatorly vision of the realization of a given anime, they are nevertheless very strongly tied to this center due to their position as precursor roles to key animation. It is also worth highlighting here already, that key animation is the single most important role in all of anime production based on sheer numbers, eclipsing in magnitude all other roles. Furthermore, due to its strong connection with the storyboard/directing roles group – as evidenced here in the graph structure or previously on the example of Hayao Miyazaki – it is the de facto center of the anime industry from the perspective of professional specialization.

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Next we have role groups that both stand alone somewhat and are characterized by a defining center of gravity, meaning that there exists a role that the other roles in the group tend to transition towards, and that has a very high level of self-reproduction. For example, once somebody starts working in background art, they will most likely keep working in background art. The single role with the highest level of self-reproduction is actually sound effects, this is the reason it both stands somewhat apart from the other roles in the sound group and the reason we highlighted it as its own one-element large single-centered group on this slide.

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We also have to once again highlight key-animation here, which also boasts a very high level of self-reproduction acting as the center of gravity for all the animation roles from the previously discussed two central animation role groups.

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These next highlighted areas are characterized by their lack of such a strong center of gravity, being more diffuse in their movement between different roles. This is not to say that there aren't more prominent roles in each of these groups, which are, for example, more common, but they don't seem to have the same level of self-reproduction that characterizes the previously highlighted groups. It is also worth noting here how self-contained and separate the color/paint/finish group seems to be in its position. And the way production advancement acts as a bridge from the producerly cluster of role groups towards the central authorial core.

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This exploded view also provides us with an opportunity to examine the individual heatmaps from before from a new angle. Here we have Mari Okada, and we can see that all her most characteristic roles (screenplay, script and series composition) are

situated in the script/screenplay/original creator group, giving her a very clear identity from this perspective of professional structure.

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Next looking at Mamoru Oshii we can see that his career is characterized by roles from both the script/screenplay/original creator and storyboard/directing groups. His individual example also captures and stands in for the strong interrelationship between these two role groups as seen on the graph.

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Turning to Hayao Miyazaki, and considering only his most numerous credit types, we can see how he personifies the strong connection between the key animation/animation director group and the script/screenplay/original creator and storyboard/directing groups with his career progression from the former to the latter two as discussed earlier.

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And finally, Naoko Yamada we can see has credits in the key animation/animation director and storyboard/directing groups as well as a strong presence in background art.

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As mentioned before, background art is the center of gravity of the art/background group with a high rate of self-reproduction, exemplified really well here in the unbroken chain of background art credits. But this also begs the question, if background artists are most often background artists only, then is Naoko Yamada a strong exception to this rule, with two seemingly parallel careers from this perspective.

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Checking the data once more, we find that this is indeed two parallel careers of two different creators both named Naoko Yamada, one a background artist and the other an animator/director.

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So, to finish up this presentation…

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…having highlighted the ways we can use credits information to create an exploded view of the profession based structure of the Japanese anime industry, let’s take a look at some of the immediate questions that come to mind when examining this data.

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Looking at some of the role groups that stand more clearly apart from what we have identified as the creatorly core of the anime industry from a profession based structural perspective the question arises, what is the reason for their relative separation? One possible answer would be the specialized technical know-how required for these areas, and/or the particular type of interest and focus that draws participants towards these roles. Another potentially interlinked possibility would be their particular position in the production process. Which then, in turn could be connected to a particular division of labour based on, for example, geography (in the case of outsourcing) or gender or precarity (such as in the case of freelancers), as already explored by researcher like Joon Yang Kim, Diane Wei Lewis, Shintarō Matsunaga and Daisuke Nagata among others. Furthermore, it could also be that we find a certain interplay of a number of these factors acting in concert in some way to create these particular role groups and their position in the overall profession based structure of the Japanese anime industry. These are some of the questions we hope to try and parse with more detailed data in the next steps of our pilot exploration of anime credits information.

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Thank you very much for your attention, and we look forward to your questions and remarks!